FROM CS8 — 8"

FROM CS4:CS5:CS7 — 10"

FROM CS4:CS5:CS6:CS7 — 10"

FROM CS4 — 8"

FROM CS3 — 6"

FROM CS1:CS2:CS3 — 8"

FROM CS1:CS2:CS3 — 10"

TP 01, TP 02, TP 03, TP 04, TP 05, TP 06, TP 07, TP 08, TP 09, TP 10, TP 11, TP 12, TP 13, TP 14, TP 19A, TP 19B, TP 20

10"x8" 10" — 10" — 10"x8" 10" — 10"x6" 10" — 10"x8" 10" — 10" 10"

10"-OC-20-001-A01A
10"-OC-20-017-A01A
8"-OC-20-002-A01A
8"-OC-20-020-A01A
6"-OC-20-003-A01A
6"-OC-20-023-A01A
10"-OC-20-004-A01A
10"-OC-20-026-A01A
10"-OC-20-005-A01A
10"-OC-20-029-A01A
8"-OC-20-048-A01A
8"-OC-20-049-A01A
8"-OC-20-006-A01A
8"-OC-20-032-A01A

TO MANIFOLD II
20312-C4-OC-C-20-002
16"x14" 16"x14" 14"

TO MANIFOLD II
20312-C4-OC-C-20-002

16"-OC-20-041-A01A

16"-OC-20-042-A01A

TO OIL RECEIVING MANIFOLD III
20312-C4-OC-C-20-003

TO OIL RECEIVING MANIFOLD III
20312-C4-OC-C-20-003

TO OIL RECEIVING MANIFOLD III
20312-C4-OC-C-20-003

TO OIL RECEIVING MANIFOLD III
20312-C4-OC-C-20-003

TO OIL RECEIVING MANIFOLD III
20312-C4-OC-C-20-003

NOTES

1. SIPSC TO ENSURE EXSTING PIPING NETWORK WITH ALL TIE IN POINTS FOR NEW NETWORK CONNECTIONS WITH GSS PRODUCTION.
2. ALL TIE-IN POINT NUMBERS PREFIXED WITH AREA CODE C4 SYSTEM NUMBER 20 & P&ID NUMBER 001

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.
2. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
4	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
3	03 Jun'09	REISSUED FOR "CONSTRUCTION"	GOH	SMD	SB	LM	WDF
2	04 Mar'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	23 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
OIL RECEIVING MANIFOLD
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-005	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-OC-C-20-001	1/1	4

CAD FILE NAME: C4DCC20001

TO EXISTING NEW NG BLOW CASE
20312-C4-DC-C-22-013
16"(A01A)

DEMULSI FIER INJECTION
20312-C4-DC-C-42-001
1"-CA-42-001-M01A

SCALE INHIBITION INJECTION
20312-C4-DC-C-42-003
1"-CA-42-002-M01A

ANTI CORROSION INJECTION
20312-C4-DC-C-42-002
1"-CA-42-003-M01A

SP 01
SP 02
SP 03

FROM CRUDE OIL MANIFOLD I
20312-C4-DC-C-20-001
16"-DC-20-042-A01A
16"x14"
14"
16"x14"
16"
TP 05

3" 4" 1½" 3"
3" 4" 1½" 3"
3"-DC-20-050-A01A
TP 04

FROM KNOCKOUT DRUM PUMP
20312-C4-DC-C-43-001
3"-DC-22-036-A01A

FROM SLOPE OIL RECYCLE PUMP
CTE-PA-44-05A/B
20312-CTE-DC-C-44-001
4"-DC-20-047-A01A

PIPELINE	C4 AREA
Z01A	A01A

OIL FROM SLOP OIL RECOVERY SYSTEM
20312-C4-DC-C-30-001
1 1/2"-DC-30-001-A01A

CONDENSATE FROM FGL PLANT
3"

FROM CRUDE OIL MANIFOLD I
20312-C4-DC-C-20-001

FROM EXISTING OLD NG BLOW CASE
20312-C4-DC-C-22-009
14"(A01A)

16"
16" NC
16"
14"
16" NC
14"
VENT
TP 03
24"x14"
TP 02
24"x14"
14"
24"

FROM EXISTING NEW NG BLOW CASE
20312-C4-DC-C-22-013

TO EXISTING CRUDE OIL TANK P3

TO EXISTING CRUDE OIL TANK P4

24"-DC-22-002-A01A
24"
TO CRUDE OIL TANK C4-RM-22-02A
20312-C4-DC-C-22-002

24"-DC-22-003-A01A
TO CRUDE OIL TANK C4-RL-22-01A
20312-C4-DC-C-22-008

NOTES

1. ALL TIE IN POINT NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 20 & P&ID NUMBER 002.
2. SIPSC TO ENSURE EXISTING PIPING NETWORK WITH ALL TIE-IN POINTS FOR NEW CONNECTIONS WITH GSS PRODUCTION.
3. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 20 & P&ID NUMBER 002.

2

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
5	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
4	05 Nov'09	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
3	03 Jun'09	REISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
2	24 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR



PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

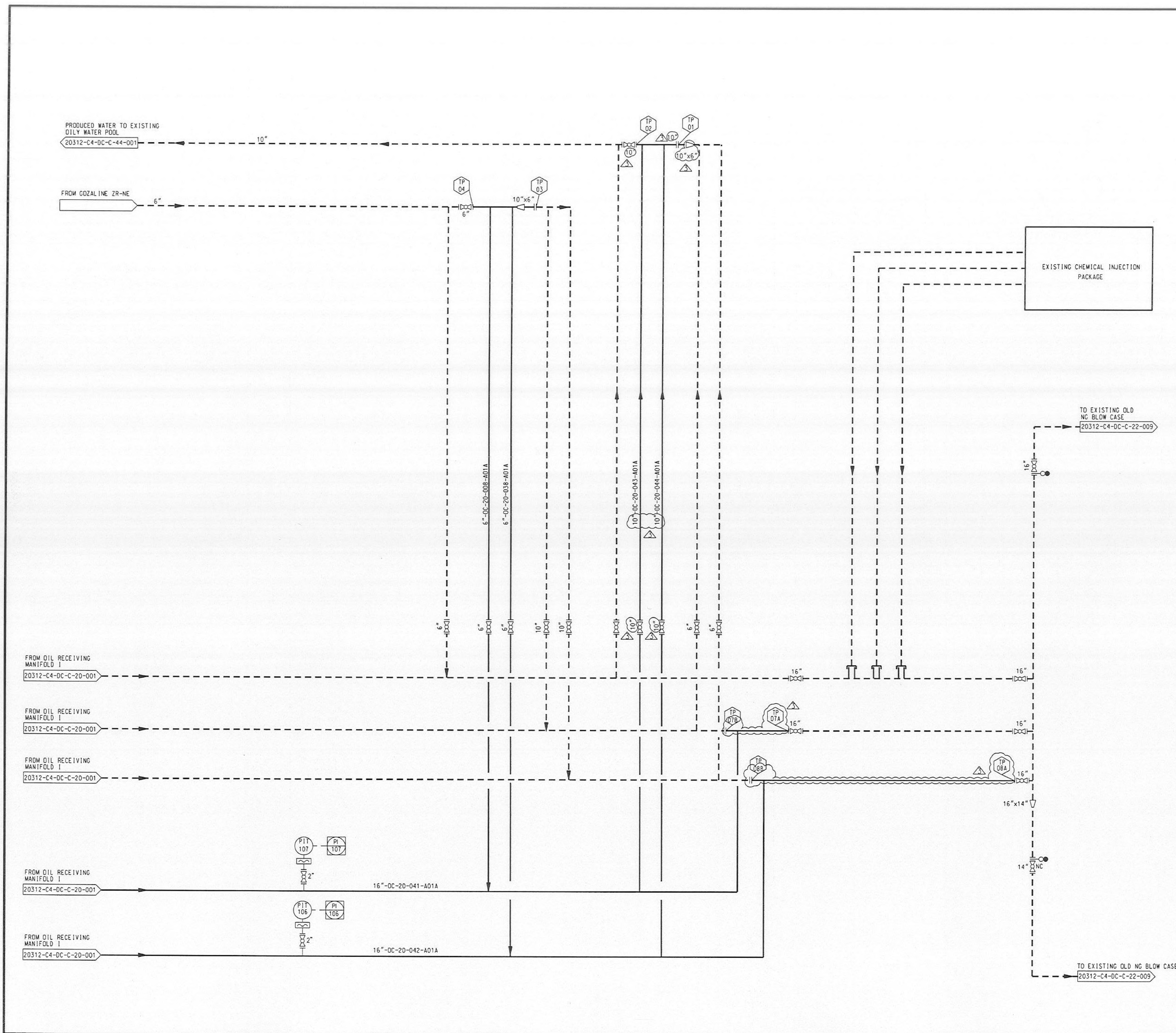
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
OIL RECEIVING MANIFOLD II
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-013	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-20-002	1/1	5

CAD FILE NAME: C4DCC20002



NOTES

1. SIPSC TO ENSURE EXSTING PIPING NETWORK WITH ALL TIE IN POINTS FOR NEW NETWORK CONNECTIONS WITH GSS PRODUCTION.
2. ALL TIE-IN POINT NUMBERS ARE PREFIXED WITH AREA ODE C4 SYSTEM NUMBER 20 & P&ID NUMBER 003.

3

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	23 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	23 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL
VECO Engineering

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE
(INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE
(SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
OIL RECEIVING MANIFOLD III
OIL PROCESS AND STORAGE CENTER

JOB CODE 20312 | CLASS A

CONTRACTOR DWG No. 20312-C4-ER21-014 | SIZE B

SCALE NONE | PROJECT * 20312 | COMPANY 'S DRAWING No. 20312-C4-DC-C-20-003 | SHT 1/1 | REV 3

CAD FILE NAME: C4DCC20003

C4-RM-22-01B (P2)
NEW CRUDE OIL STORAGE TANK

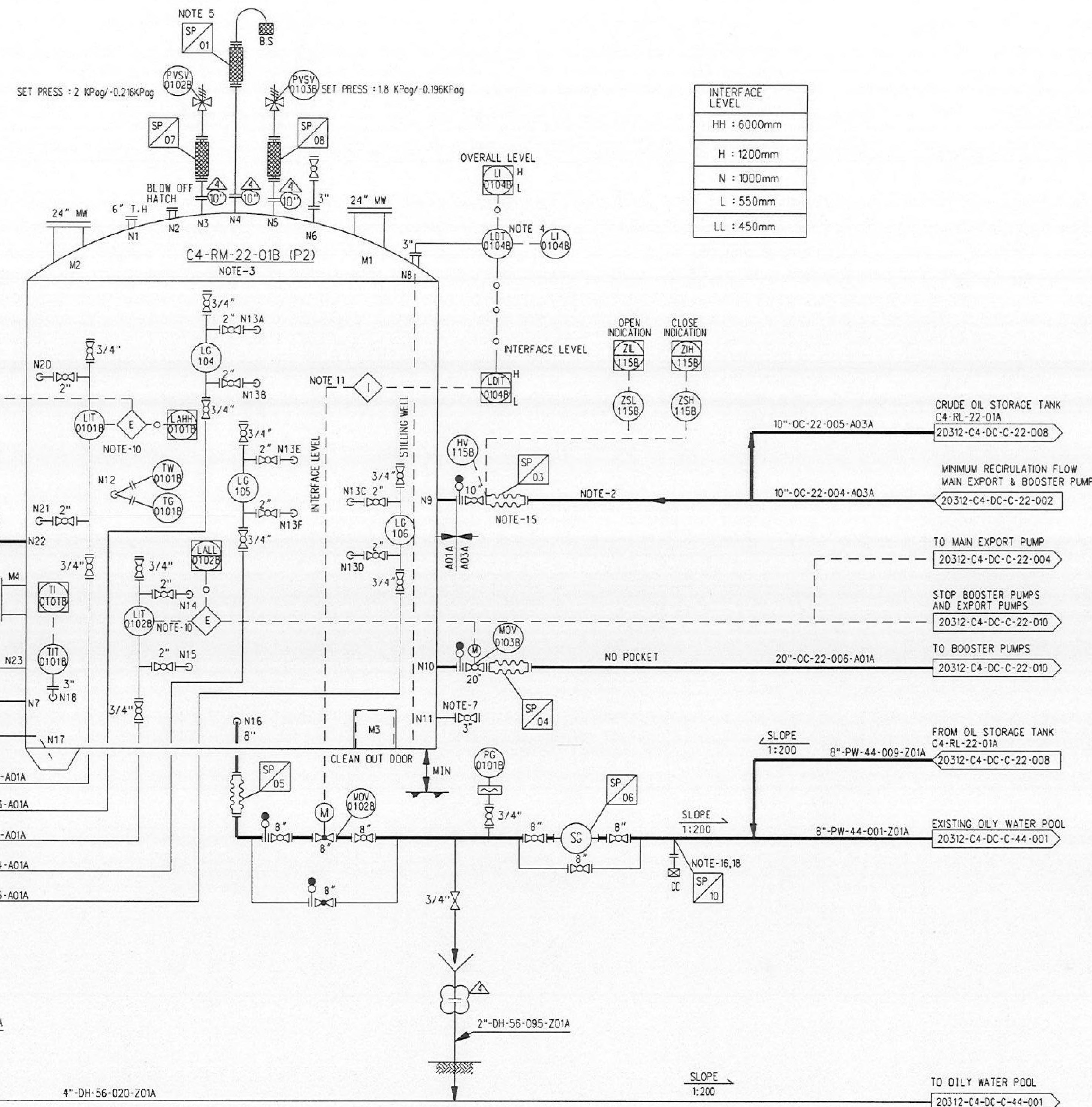
CAPACITY : $10000m^3$
SIZE : 34140mm (ID)x10720mm (T/T)
DESIGN PRESS : 2 KPag/-0.216KPag
DESIGN TEMP : 85°C/-6°C
MOC : CS INTERNALLY COATED WITH GLASS FLAKES EPOXY
TRIM : OC-C4-RM-22-01B-A01A

SAMPLINE POINT LINE NUMBERS	
NOZZLE NO.	LINE NUMBERS
N23A	2"-DH-56-022-A01A
N23B	2"-DH-56-023-A01A
N23C	2"-DH-56-024-A01A
N23D	2"-DH-56-025-A01A

LIQUID LEVELS
HH : 9285mm
H : 7504mm
N : 5360mm
L : 4288mm
LL : 1608mm

NOTE 6

INTERFACE LEVEL
HH : 6000mm
H : 1200mm
N : 1000mm
L : 550mm
LL : 450mm



FROM CRUDE OIL TANK
C4-RL-22-01A
20312-C4-DC-C-22-008
24"-OC-22-001-A01A
1"-DC-30-028-A01A
1"-DC-30-027-A01A
2"-DC-30-009-A01A
SET PRESS : 10 bar(g)
NO POCKET
NOTE-1
NOTE-16,17
3/4"-DH-56-016-A01A
3/4"-DH-56-073-A01A
3/4"-DH-56-017-A01A
3/4"-DH-56-074-A01A
3/4"-DH-56-075-A01A
4"-DH-56-019-A01A
4"-DH-56-086-A01A
4"-DH-56-021-Z01A
4"-DH-56-087-Z01A
(TYP 4)
TO SLOP OIL RECOVERY UNIT
20312-C4-DC-C-30-001
SLOPE 1:200

NOTES

1. SYMMETRICAL PIPING FOR EACH TANK INLET LINE
2. NOZZELS TO BE PROVIDED BELOW LAL TO PREVENT STATIC SHOCK
3. FOAM POURER AND COOLING WATER REFER TO P&ID No. 20312-C4-DC-C-71-002, 003 & 004.
4. VISIBLE FROM GRADE AND ACCESSIBLE.
5. THE VENT SHALL BE LOCATED 3M ABOVE THE ROOF OF THE CRUDE OIL STORAGE TANK.
6. THE LEVELS ARE MEASURED FROM THE BOTTOM OF THE TANK.
7. SPARE NOZZLES WITH DIP-PIPE TO WITHDRAW DEAD STOCK INSIDE THE CRUDE TANK.
8. TANK IS PROVIDED WITH CATHODIC PROTECTION INSULATING GASKETS SHALL BE PROVIDED ON ALL TANK NOZZLE PIPED TO OTHER EQUIPMENT.
9. SAMPLE CONNECTION AT 500MM, 1000MM, 2500MM, 4000MM ABOVE THE TANK BASE.
10. HIGH HIGH OIL LEVEL WILL CLOSE THE TANK INLET VALVE, LOW LOW OIL LEVEL WILL CLOSE THE TANK OUTLET VALVE.
11. HIGH HIGH INTERFACE LEVEL WILL OPEN THE WATER DRAIN VALVE AND LOW LOW INTERFACE LEVEL WILL CLOSE THE WATER DRAIN VALVE.
12. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
13. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 22 & P&ID NUMBER 001.
14. FLAME ARRESTOR & PVSVs WILL BE DIRECTLY MOUNTED ON TANK NOZZLE.
15. VALVE TO BE SUPPLIED WITH LIMITS SWITCH WITH INDICATION IN DCS.
16. FLUSH MOUNTED CORROSION COUPONS(CC) AT 12 O' CLOCK POSITIONS.
17. A MINIMUM DISTANCE 7 PIPE DIAMETERS UPSTREAM OF STORAGE TANKS.
18. A MINIMUM DISTANCE 7 PIPE DIAMETERS DOWNSTREAM OF STORAGE TANKS.
19. FOAM POURER NOZZLES TO BE PROVIDED AS PER SHOWN IN FOAM SPRAY RING PID'S.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER
   20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER
   20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER
   20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER
   20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER
   20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.
2. DELETED.
2. DELETED.

REFERENCE DRAWINGS	
OIL STORAGE TANK	ZR02-DWG-C4-PR-01-002

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
4	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
3	05 Nov'09	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR
CHEMHILL
VECO Engineering

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
$10000M^3$ OIL STORAGE TANK (C4-RM-22-01B)
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-001	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-001	1/1	4

CAD FILE NAME: C4DCC22001

C4-RM-22-02A (P3)
CRUDE OIL STORAGE TANK

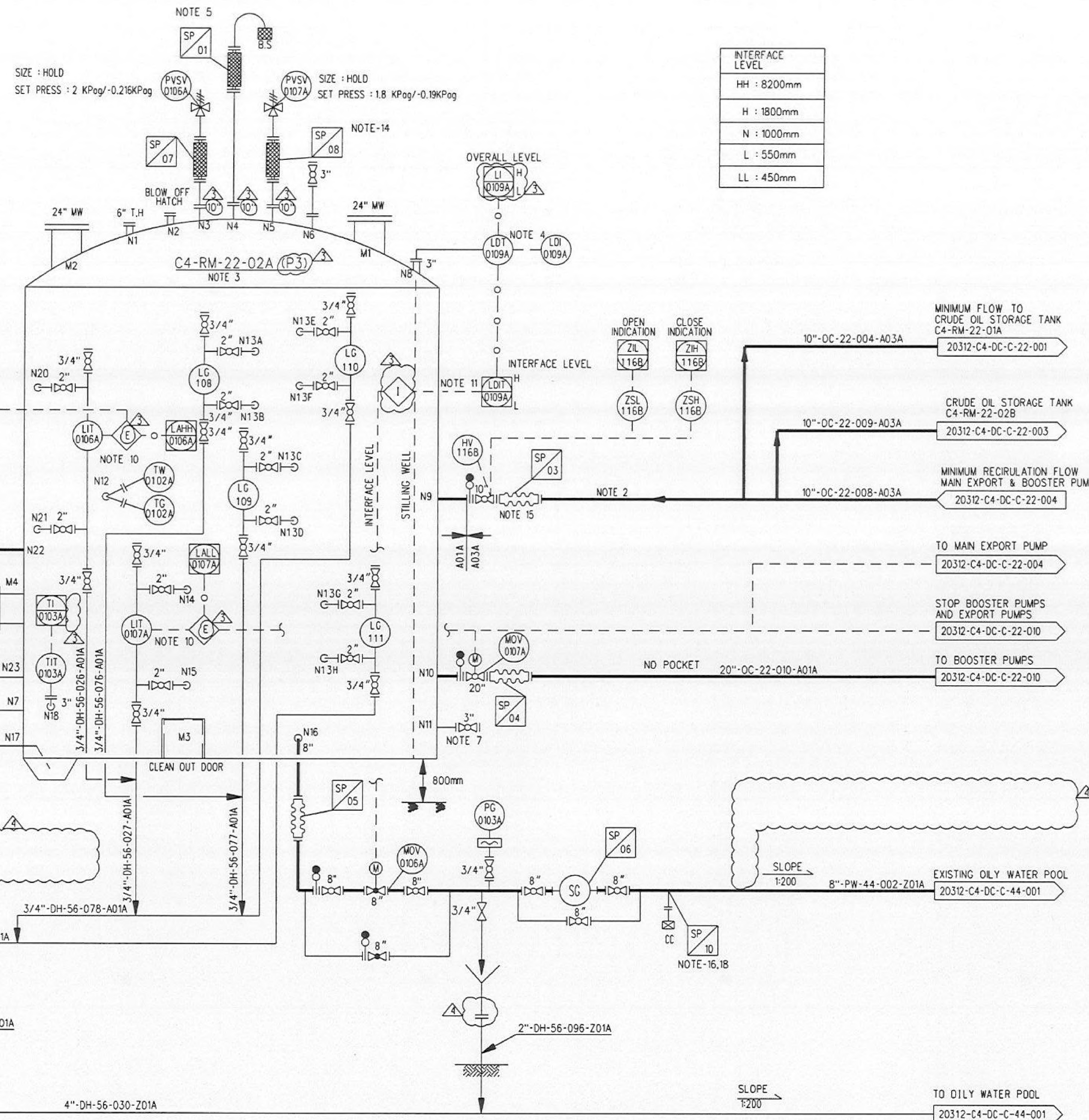
CAPACITY : $7650m^3$
SIZE : 28350mm (ID)x12120mm (T/T)
DESIGN PRESS : 2.0 KPag/-0.216KPag
DESIGN TEMP : 85°C/-6°C
MOC : CS INTERNALLY COATED WITH GLASS FLAKES EPOXY
TRIM : OC-C4-RM-22-02A-A01A

SAMPLINE POINT LINE NUMBERS	
NOZZLE NO.	LINE NUMBERS
N23A	2"-DH-56-032-A01A
N23B	2"-DH-56-033-A01A
N23C	2"-DH-56-034-A01A
N23D	2"-DH-56-035-A01A

LIQUID LEVELS
HH : 10302mm
H : 8484mm
N : 6060mm
L : 4848mm
LL : 1818mm

NOTE 6

INTERFACE LEVEL
HH : 8200mm
H : 1800mm
N : 1000mm
L : 550mm
LL : 450mm



NOTES

1. SYMMETRICAL PIPING FOR EACH TANK INLET LINE
2. NOZZELS TO BE PROVIDED BELOW LAL TO PREVENT STATIC SHOCK
3. FOAM POURER AND COOLING WATER REFER TO P&ID No. 20312-C4-DC-C-71-002, 003 & 004.
4. VISIBLE FROM GRADE AND ACCESSIBLE.
5. THE VENT SHALL BE LOCATED 3M ABOVE THE ROOF OF THE CRUDE OIL STORAGE TANK.
6. THE LEVELS ARE MEASURED FROM THE BOTTOM OF THE TANK.
7. SPARE NOZZLES WITH DIP-PIPE TO WITHDRAW DEAD STOCK INSIDE THE CRUDE TANK.
8. TANK IS PROVIDED WITH CATHODIC PROTECTION INSULATING GASKETS SHALL BE PROVIDED ON ALL TANK NOZZLE PIPED TO OTHER EQUIPMENT.
9. SAMPLE CONNECTION AT 500MM, 1000MM, 2500MM, 4000MM ABOVE THE TANK BASE.
10. HIGH HIGH OIL LEVEL WILL CLOSE THE TANK INLET VALVE, LOW LOW OIL LEVEL WILL CLOSE THE TANK OUTLET VALVE.
11. HIGH HIGH INTERFACE LEVEL WILL OPEN THE WATER DRAIN VALVE AND LOW LOW INTERFACE LEVEL WILL CLOSE THE WATER DRAIN VALVE.
12. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
13. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 22 & P&ID NUMBER 002.
14. FLAME ARRESTORS & PVSVs WILL BE DIRECTLY MOUNTED ON TANK NOZZLE.
15. VALVE TO BE SUPPLIED WITH LIMITS SWITCH WITH INDICATION IN DCS.
16. FLUSH MOUNTED CORROSION COUPONS(CC) AT 12 O' CLOCK POSITIONS.
17. A MINIMUM DISTANCE 7 PIPE DIAMETERS UPSTREAM OF STORAGE TANKS.
18. A MINIMUM DISTANCE 7 PIPE DIAMETERS DOWNSTREAM OF STORAGE TANKS.
19. FOAM POURER NOZZLES TO BE PROVIDED AS PER SHOWN IN FOAM SPRAY RING PID'S.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.
2. DELETED.
3. DELETED.

REFERENCE DRAWINGS	
OIL STORAGE TANK	ZR02-DWG-C4-PR-01-002

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
4	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
3	05 Nov'09	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GOH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL VECO Engineering

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

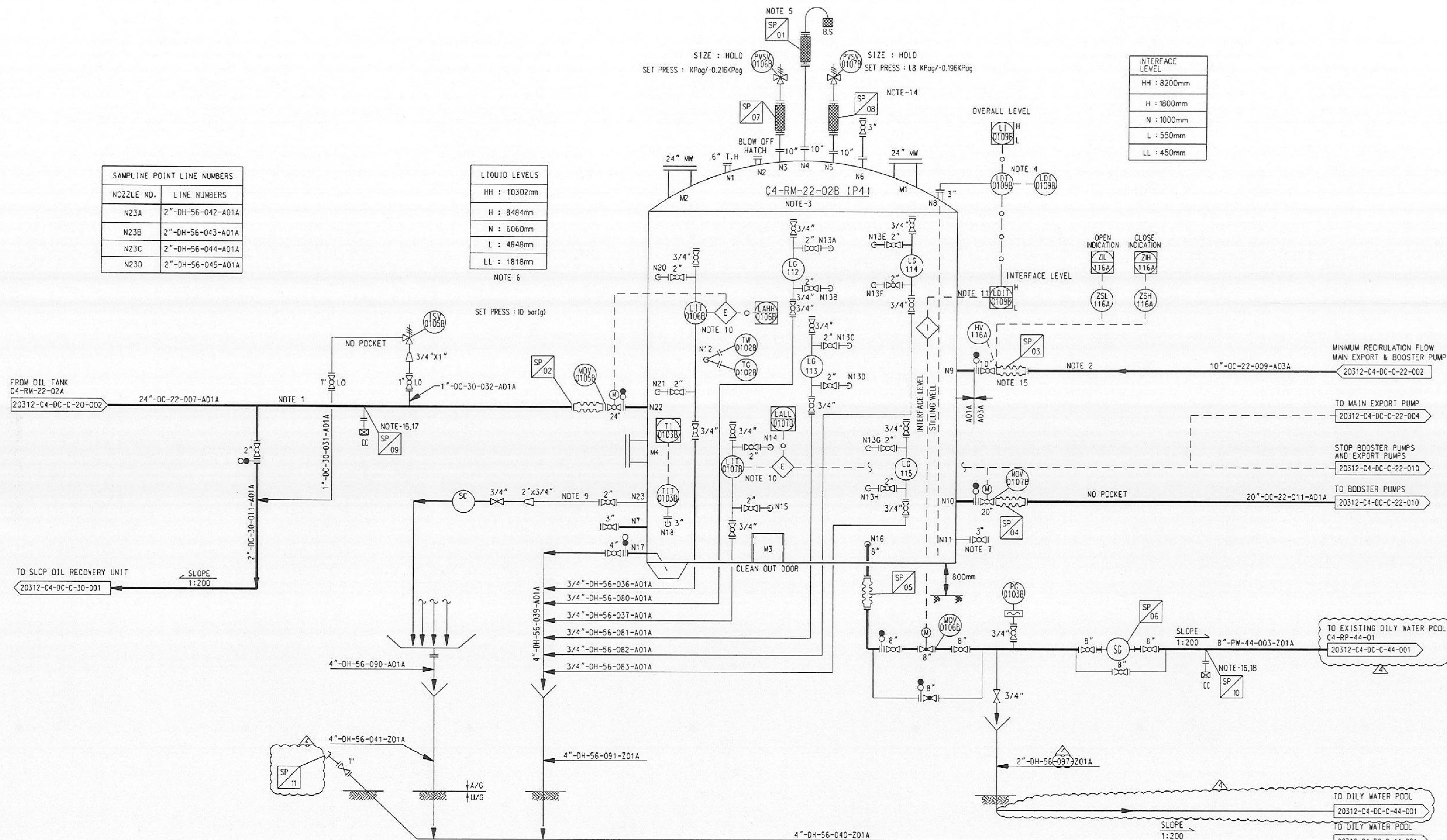
P & ID
$7650M^3$ OIL STORAGE TANK (C4-RM-22-02A)
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A

CONTRACTOR DWG No.	SIZE
20312-C4-ER21-002	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-002	1/1	4

CAD FILE NAME: C4DCC22002



SAMPLINE POINT LINE NUMBERS	
NOZZLE NO.	LINE NUMBERS
N23A	2"-DH-56-042-A01A
N23B	2"-DH-56-043-A01A
N23C	2"-DH-56-044-A01A
N23D	2"-DH-56-045-A01A

LIQUID LEVELS
HH : 10302mm
H : 8484mm
N : 6060mm
L : 4848mm
LL : 1818mm

NOTE 6

INTERFACE LEVEL
HH : 8200mm
H : 1800mm
N : 1000mm
L : 550mm
LL : 450mm

NOTES

1. SYMMETRICAL PIPING FOR EACH TANK INLET LINE
2. NOZZELS TO BE PROVIDED BELOW LAL TO PREVENT STATIC SHOCK
3. FOAM POURER AND COOLING WATER REFER TO P&ID No. 20312-C4-DC-C-71-002, 003 & 004.
4. VISIBLE FROM GRADE AND ACCESSIBLE.
5. THE VENT SHALL BE LOCATED 3M ABOVE THE ROOF OF THE CRUDE OIL STORAGE TANK.
6. THE LEVELS ARE MEASURED FROM THE BOTTOM OF THE TANK.
7. SPARE NOZZLES WITH DIP-PIPE TO WITHDRAW DEAD STOCK INSIDE THE CRUDE TANK.
8. TANK IS PROVIDED WITH CATHODIC PROTECTION INSULATING GASKETS SHALL BE PROVIDED ON ALL TANK NOZZLE PIPED TO OTHER EQUIPMENT.
9. SAMPLE CONNECTION AT 500MM, 1000MM, 2500MM, 4000MM ABOVE THE TANK BASE.
10. HIGH HIGH OIL LEVEL WILL CLOSE THE TANK INLET VALVE, LOW LOW OIL LEVEL WILL CLOSE THE TANK OUTLET VALVE.
11. HIGH HIGH INTERFACE LEVEL WILL OPEN THE WATER DRAIN VALVE AND LOW LOW INTERFACE LEVEL WILL CLOSE THE WATER DRAIN VALVE.
12. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
13. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 22 & P&ID NUMBER 003.
14. FLAME ARRESTORS & PVSVs WILL BE DIRECTLY MOUNTED ON TANK NOZZLES.
15. VALVE TO BE SUPPLIED WITH LIMITS SWITCH WITH INDICATION IN DCS.
16. FLUSH MOUNTED CORROSION COUPONS(CC) AT 12 O' CLOCK POSITIONS.
17. A MINIMUM DISTANCE 7 PIPE DIAMETERS UPSTREAM OF STORAGE TANKS.
18. A MINIMUM DISTANCE 7 PIPE DIAMETERS DOWNSTREAM OF STORAGE TANKS.
19. FOAM POURER NOZZLES TO BE PROVIDED AS PER SHOWN IN FOAM SPRAY RING PID'S.

6

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.
2. DELETED.
3. DELETED.

REFERENCE DRAWINGS	
OIL STORAGE TANK	ZR02-DWG-C4-PR-01-002

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
4	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
3	05 Nov'09	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GOH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL
VECO Engineering

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

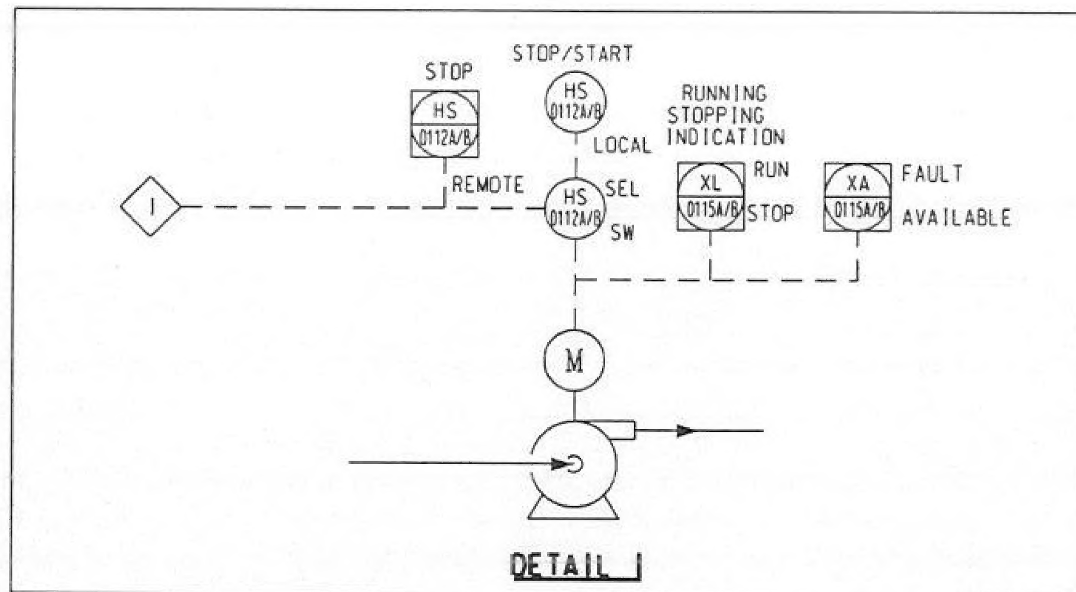
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
7650M³ OIL STORAGE TANK (C4-RM-22-02B)
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312			CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-003			SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-22-003		SHT 1/1	REV 4

CAD FILE NAME: C4DCC22003



C4-PA-22-01A/B
CRUDE OIL EXPORT PUMPS

CAPACITY : 640 m^3/hr
DISCHARGE DESIGN PRESS : 30 bar(g)
DIFF. HEAD : 353.8 MLC
DESIGN TEMP. : 85°C/-6°C
MOTOR : 690Kw
TYPE : CENTRIFUGAL STAGE (HORIZONTAL)

FROM CRUDE OIL BOOSTER PUMPS 20312-C4-DC-C-22-010

FROM CRUDE OIL TANK 20312-C4-DC-C-22-008

FROM CRUDE OIL TANK 20312-C4-DC-C-22-001

FROM CRUDE OIL TANK 20312-C4-DC-C-22-002

FROM CRUDE OIL TANKS 20312-C4-DC-C-22-003

MINIMUM FLOW TO CRUDE STORAGE TANK C4-RM-22-02A/B 20312-C4-DC-C-22-002

TO METERING SKID 20312-C4-DC-C-22-006

FOR PRIVATE USE IN EXISTING TANK CAR FILLING STATION OUTSIDE THE FENCE

TO SLOP OIL RECOVERY UNIT 20312-C4-DC-C-30-001

FROM BOOSTER PUMP 20312-C4-DC-C-22-010

FROM BOOSTER PUMP DISCHARGE 20312-C4-DC-C-22-010

FROM BOOSTER PUMP DISCHARGE 20312-C4-DC-C-22-010

FROM BOOSTER DISCHARG 20312-C4-DC-C-22-010

NOTES

1. FLUSHING CONNECTION
2. PUMP VENDER TO SUPPLY PROCESS DATA TO PREPARE FCV INSTRUMENT DATASHEET.
3. TEMPERATURE MONITORING INSTRUMENT AND VIBRATION TRANSMITTER SHALL BE PROVIDED BY PUMP VENDOR. TEMPERATURE MONITORING INSTRUMENT IS PART OF SAFETY SYSTEM REFER TO PUMP P&ID 20312-C4-DC-C-22-012.
4. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 SYSTEM NUMBER 87.
5. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 22 & P&ID NUMBER 004.
6. STANDBY PUMP CAN'T BE STARTED WHILE THE DUTY PUMP IS RUNNING.
7. WHEN ONE PUMP AMONG BOOSTER PUMP & EXPORT PUMP TRIPS STOP ANOTHER PUMP.
8. DUTY PUMP WILL TRIP ONLY WHEN PRESSURE HIGH ALARM ON PT0102A/B VIBRATION HIGH ALARM ON VS0102A/B & TEMP. HIGH ALARM ON TI0102A/B
9. FLUSH MOUNTED CORROSION COUPONS(CC) AT 12 O' CLOCK POSITIONS.
10. A MINIMUM DISTANCE 7 PIPE DIAMETERS DOWNSTREAM OF MAIN EXPORT PUMP.
11. THE LINE SIZE CALCULATED FOR PRIVATE USE BASED ON LENGTH OF 500m.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.
2. DELETED.
3. DELETED.

REFERENCE DRAWINGS

EXPORT PUMP, METERING & CALIBRATION SYSTEM	ZR02-DWG-C4-PR-01-003

REVISIONS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR
CH2MHILL

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
CRUDE OIL EXPORT PUMPS
OIL PROCESS AND STORAGE CENTRE

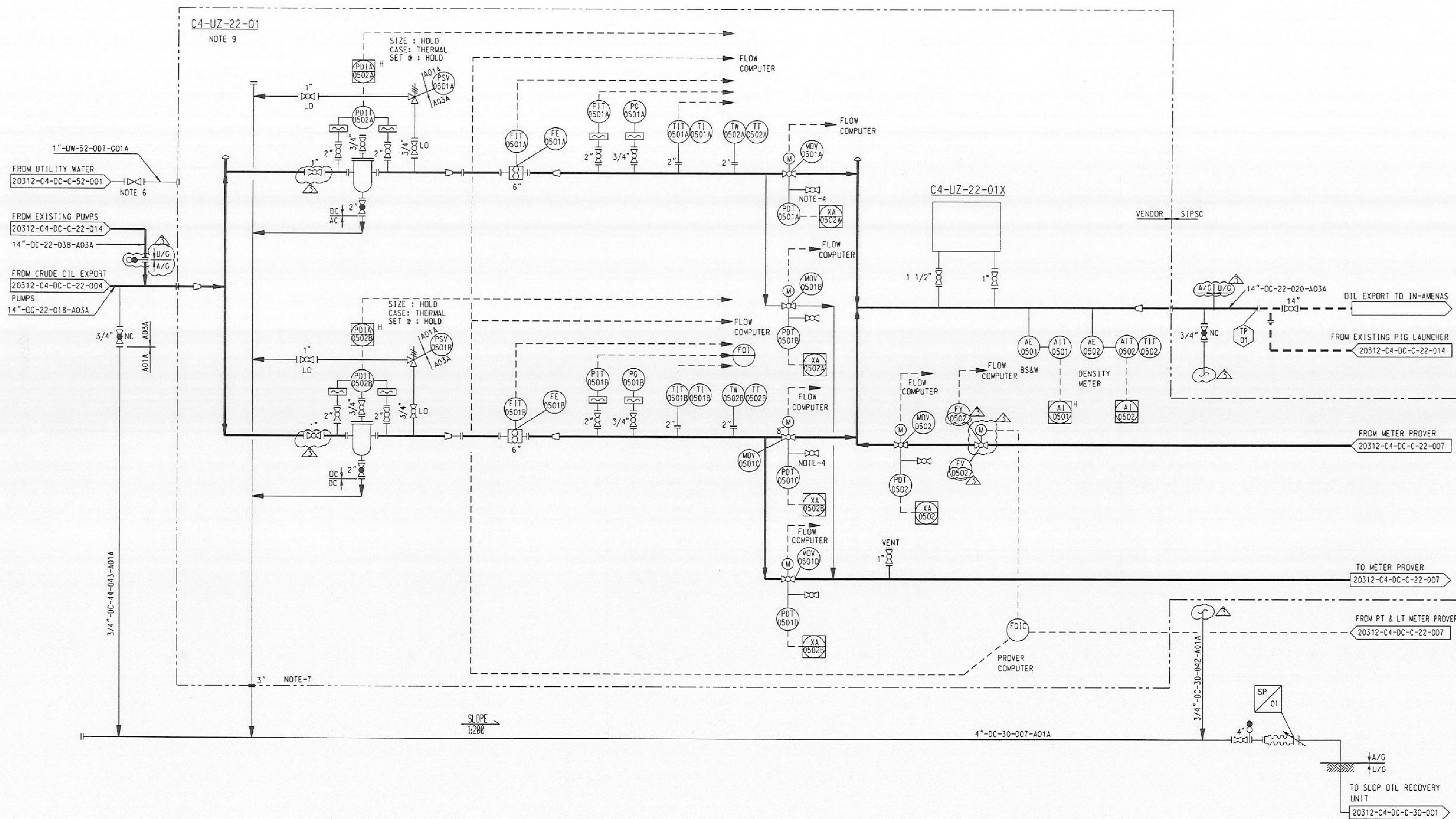
JOB CODE	20312	CLASS	A	
CONTRACTOR DWG No.	20312-C4-ER21-004		SIZE B	
SCALE NONE	PROJECT # 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-22-004	SHT 1/1	REV 3

CAD FILE NAME: C4DCC22004

C4-UZ-22-01X
AUTO SAMPLING DEVICE

C4-UZ-22-01
CUSTODY TRANSFER METERING SKID

CAPACITY : 640 m³/hr
DESIGN PRESS : 33 bar(g)
OP. DESIGN TEMP : 85°C/-6°C



NOTES

1. IN NORMAL OPERATION BOTH FLOW METER WILL BE IN LINE & OPERATING WITH 50% CAPACITY WHERE AS IN CASE OF FAILURE OF ONE METER SECOND WILL BE OPERATED WITH 100% CAPACITY.
2. BS&W AND DENSITY METERS ARE PART OF AUTOMATIC SAMPLING DEVICE. AND CONNECTED TO THE FLOW METERING SYSTEM.
3. VALVE LEAKAGE ALARM.
4. SIZE TO BE CONFIRMED BY VENDOR.
5. ALL CONTROL & INSTRUMENT TO BE FINALIZED AFTER VENDOR INPUT.
6. WATER WILL BE SUPPLIED FROM THE NEARLY UTILITY STATION.
7. THE SURGE ANALYSIS OF THE EXISTING EXPORT PIPELINE IS OTHERS RESPONSIBILITY. THE RELATIVE REQUIREMENT FROM THE ANALYSIS SHALL BE PROVIDED BY GSS. ANTI-SURGE MEASURES MAY BE NEEDED PER THE ANALYSIS RESULT.
8. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIX WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
9. TO BE FINALLIZED BY VENDER.
10. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 22 & P&ID NUMBER 006.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

REFERENCE DRAWINGS

EXPORT PUMP. METERING & CALIBRATION SYSTEM	ZR02-DWG-C4-PR-01-003

REVISIONS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

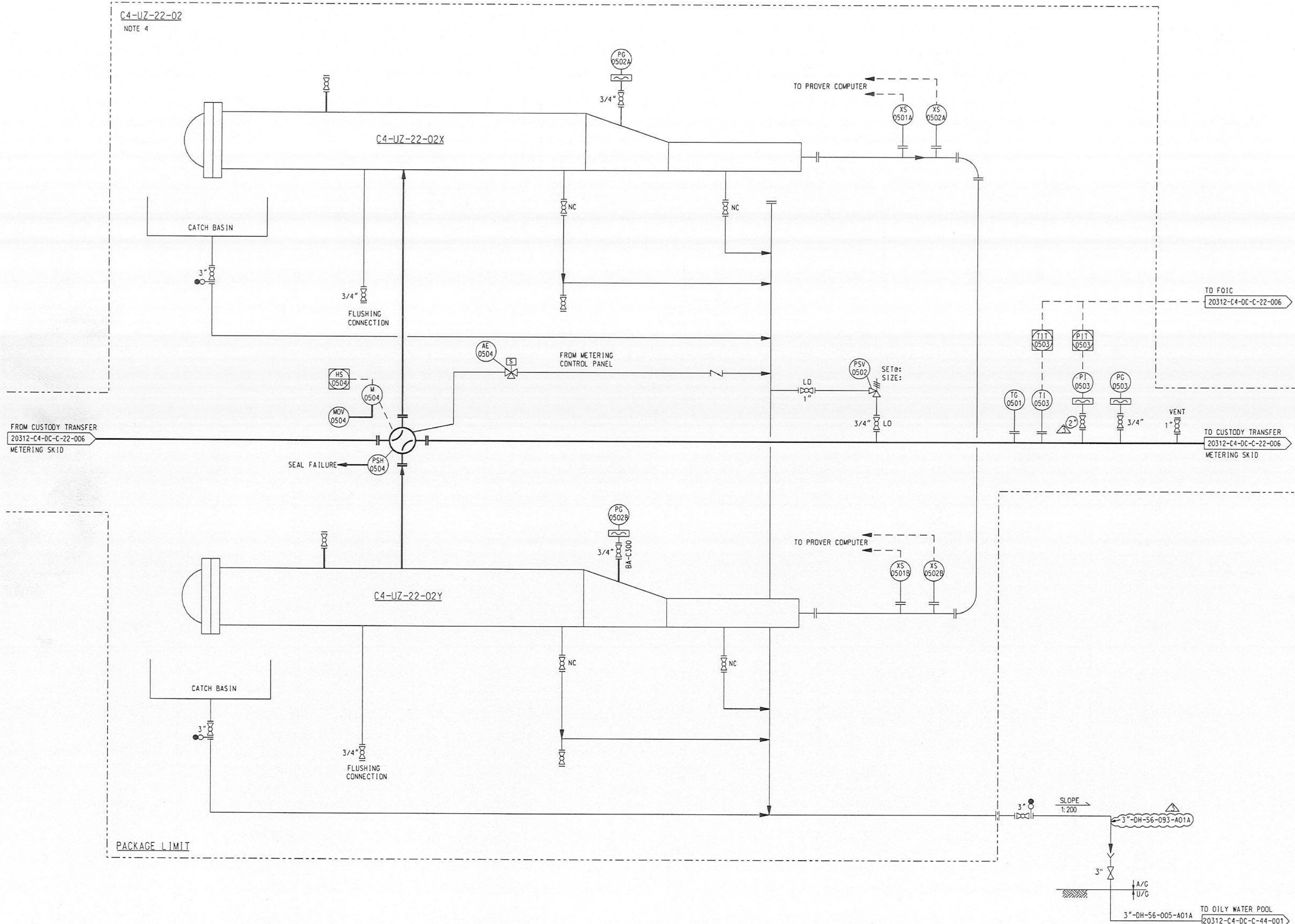
P & ID
CUSTODY TRANSFER METERING SKID
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312		CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-006		SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-22-006	SHT 1/1	REV 3

CAD FILE NAME: C4DCC22006

C4-UZ-22-02
METER PROVER SKID
300# ANSI SINGLE LOOP
DESIGN PRESS : 30 barg
DESIGN TEMP.: 85/-6°C

C4-UZ-22-02X/Y
SPHERE LAUNCHEERS



NOTES

1. DETAILS TO BE DETERMINED BY VENDOR.
2. ALL CONTROL & INSTRUMENT TO BE FINALIZED AFTER VENDOR INPUT.
3. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIX WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
4. TO BE FINALLIZED BY VENDER.

9

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.
2. DELETED.

3

REFERENCE DRAWINGS

EXPORT PUMP. METERING & CALIBRATION SYSTEM	ZR02-DWG-C4-PR-01-003

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
METER PROVER SKID
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-007	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-007	1/1	3

CAD FILE NAME: C4DCC22007

C4-UO-22-01
EXISTING OLD NG BLOW CASE (NOTE 1)

HYDROTEST PRESS : 4.55 bar
DESIGN TEMP. : 85°/-6
VOLUME : 45 m^3
CA : 3 mm

NOTES

1. OLD NG BLOW CASE IS EXISTING EQUIPMENT & SIPSC TO ENSURE DETAIL SHOWN IN THE CONSEPTUAL SKETCH WITH TIE IN POINTS FOR NEW FLAIR SYSTEM WITH GSS PRODUCTION.
2. DELETED.
3. ALL TIE-IN POINT NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 22 & P&ID NUMBER 009.
4. LOCAL MOUNTED PNEUMATIC CONTROLLER

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.

REFERENCE DRAWINGS

FROM OIL RECEIVING MANIFOLD III
20312-C4-DC-C-20-003

TO FLARE SYSTEM
20312-C4-DC-C-43-003
1"-FG-43-001-A01A

FROM FGL FUEL GAS (9-12 barg)

SET PRESS: 5 barg

PSV PSE PIC PV XX LV XX LC XXX NOTE 4 LSH LSL LG TP 01 NC

24" 6" 1"

GSS EXISTING FACILITY | SIPSC

TO FLARE SYSTEM
20312-C4-DC-C-22-013

TO DRAIN

TO CRUDE OIL RECEIVING MANIFOLD II
20312-C4-DC-C-20-002
14"

FROM OIL RECEIVING MANIFOLD III
20312-C4-DC-C-20-003

C4-UO-22-01

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
4	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
3	03 Jun'09	REISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR
CH2MHILL

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

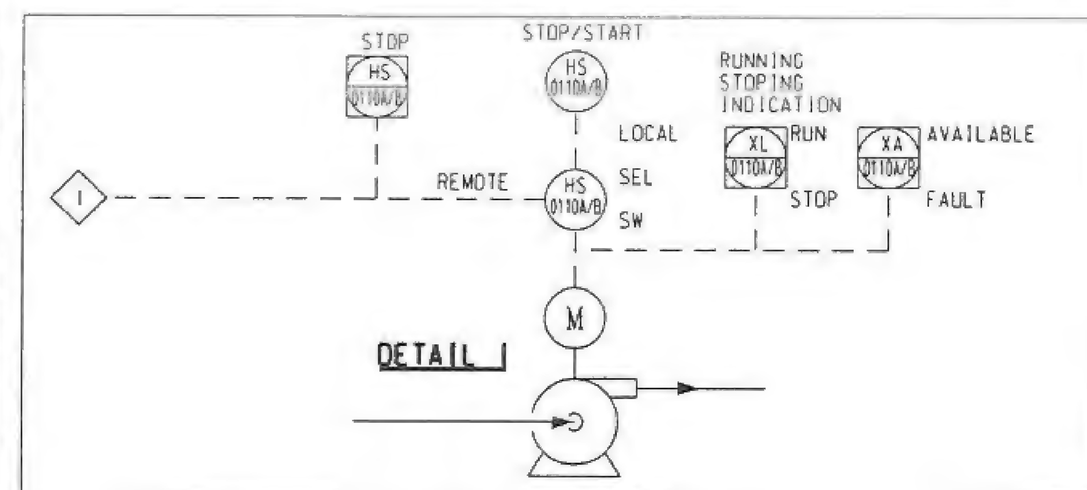
PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
EXISTING OLD NG BLOW CASE
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-009	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-009	1/1	4

CAD FILE NAME: C4DCC22009



C4-PA-22-02A/B

CRUDE OIL BOOSTER PUMPS

CAPACITY : 640 m^3/hr
DISCHARGE DESIGN PRESS : 3.22 bar(g)
DIFF. HEAD : 40.3 MLC
DESIGN TEMP. : 85°C/-6°C
MOTOR : 110Kw
TYPE : CENTRIFUGAL STAGE (VERTICAL)

MINI.FLOW LINE FROM EXPORT PUMPS TO STORAGE TANK C4-PA-22-01A/B — 20312-C4-DC-C-22-004

TO EXPORT PUMPS C4-PA-22-01A — 20312-C4"-DC-C-22-004

TO EXPORT PUMPS C4-PA-22-01B — 20312-C4"-DC-C-22-004

FROM ANTI-CORROSION CHEMICAL INJECTION SKID — 20312-C4-DC-C-42-002

FROM CRUDE OIL TANK — 20312-C4-DC-C-22-008

FROM CRUDE OIL TANK — 20312-C4-DC-C-22-001

FROM CRUDE OIL TANK — 20312-C4-DC-C-22-002

FROM CRUDE OIL TANK — 20312-C4-DC-C-22-003

LEVEL STOP PUMPS

BY VENDOR

SEE DETAIL 1

C4-PA-22-02A NOTE-4,9

C4-PA-22-02B NOTE-4,9

SET @ 0.13 barg

STOP PUMP

TO SLOP OIL RECOVERY UNIT — 20312-C4-DC-C-22-004

TO EXPORT PUMP DISCHARGE C4-PA-22-01A/B — 20312-C4-DC-C-22-004

NOTE 6

NOTE 8

TO EXISTING PUMPING STATION — 20312-C4-DC-C-22-014

FROM EXISTING CRUDE OIL TANK P3

FROM EXISTING CRUDE OIL TANK P4

FROM CRUDE OIL TANK C4-RL-22-01A — 20312-C4-DC-C-22-008

FROM CRUDE OIL TANK C4-RM-22-01B — 20312-C4-DC-C-22-001

FROM CRUDE OIL TANK C4-RM-22-02A — 20312-C4-DC-C-22-002

FROM CRUDE OIL TANK C4-RM-22-02B — 20312-C4-DC-C-22-003

NOTES

1. FLUSHING CONNECTION
2. MESH SIZE 20 TO BE CONFIRMED BY VENDOR.
3. DELETED.
4. TEMPERATURE MONITORING INSTRUMENT AND VIBRATION TRANSMITTAL SHALL BE PROVIDED BY PUMP VENDOR. TEMPERATURE MONITORING INSTRUMENT IS PART OF SAFETY SYSTEM REFER TO P&ID 20312-C4-DC-C-22-011.
5. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIX WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
6. EXISTING HEADER.
7. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 22 & P&ID NUMBER 010.
8. THIS LINE IS EXISTING LINE WHEN NEW CRUDE OIL TANKS WILL BE PLACED IN USE THIS LINE WILL BE REPLACED BY NEW LINE.
9. STANDBY PUMP CAN'T BE STARTED WHILE THE DUTY PUMP IS RUNNING.

GENERAL NOTES;

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST ;

1. DELETED.
2. DELETED.
3. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

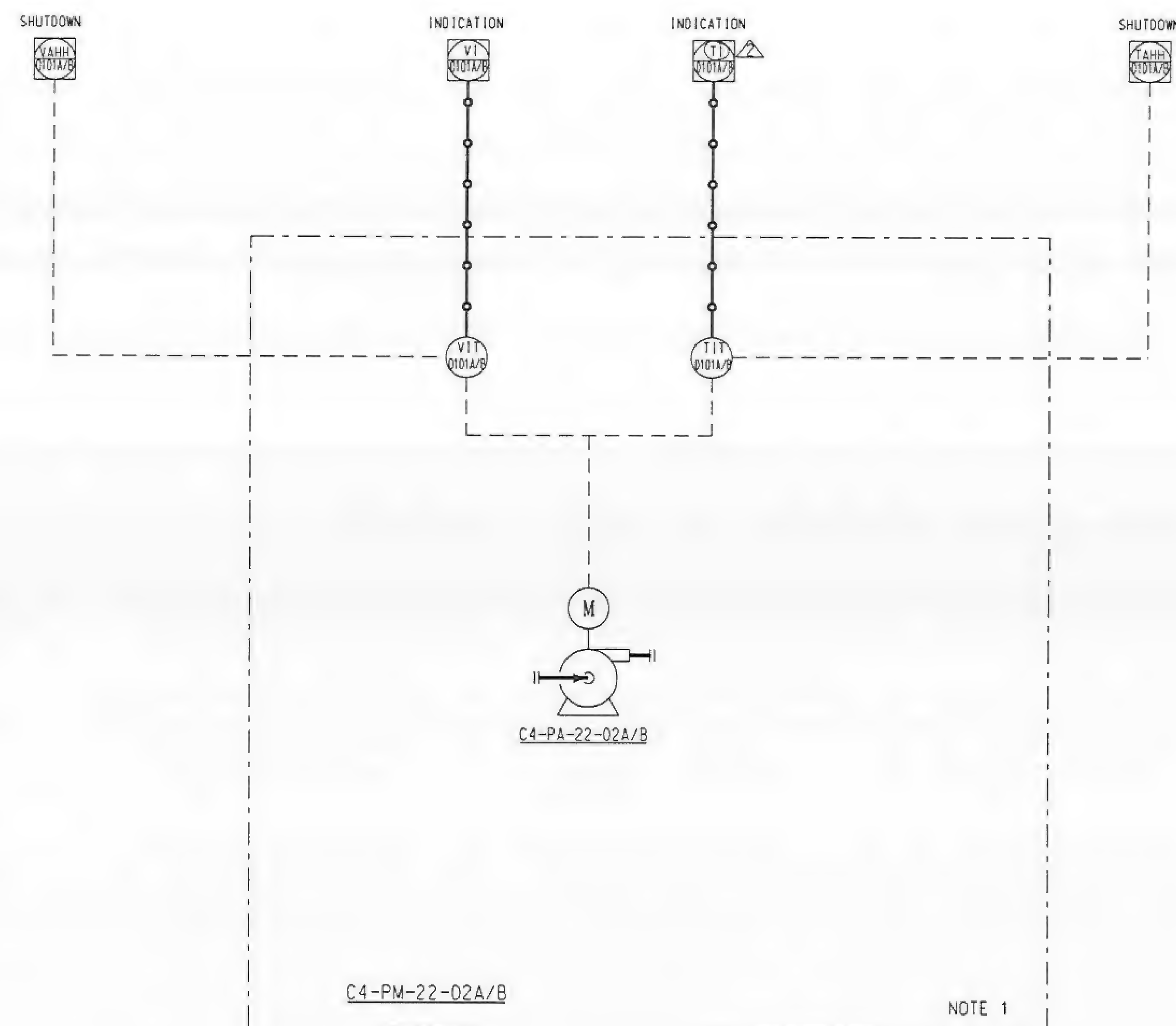
DRAWING TITLE: P & ID CRUDE OIL BOOSTER PUMPS OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-010	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-010	1/1	3

CAD FILE NAME: C4DCC22010

C4-PM-22-02A/B
DRIVES FOR CRUDE OIL BOOSTER PUMPS
POWER : 110KW



NOTES

1. DETAILED P&ID FOR BOOSTER PUMPS VIBRATION AND TEMPERATURE MONITORING WILL BE DONE BY VENDOR.

12

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-14-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED. 2

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
2	17 Mar'10	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR
CHEMHILL

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
CRUDE OIL BOOSTER PUMPS DRIVES
OIL PROCESS AND STORAGE CENTER

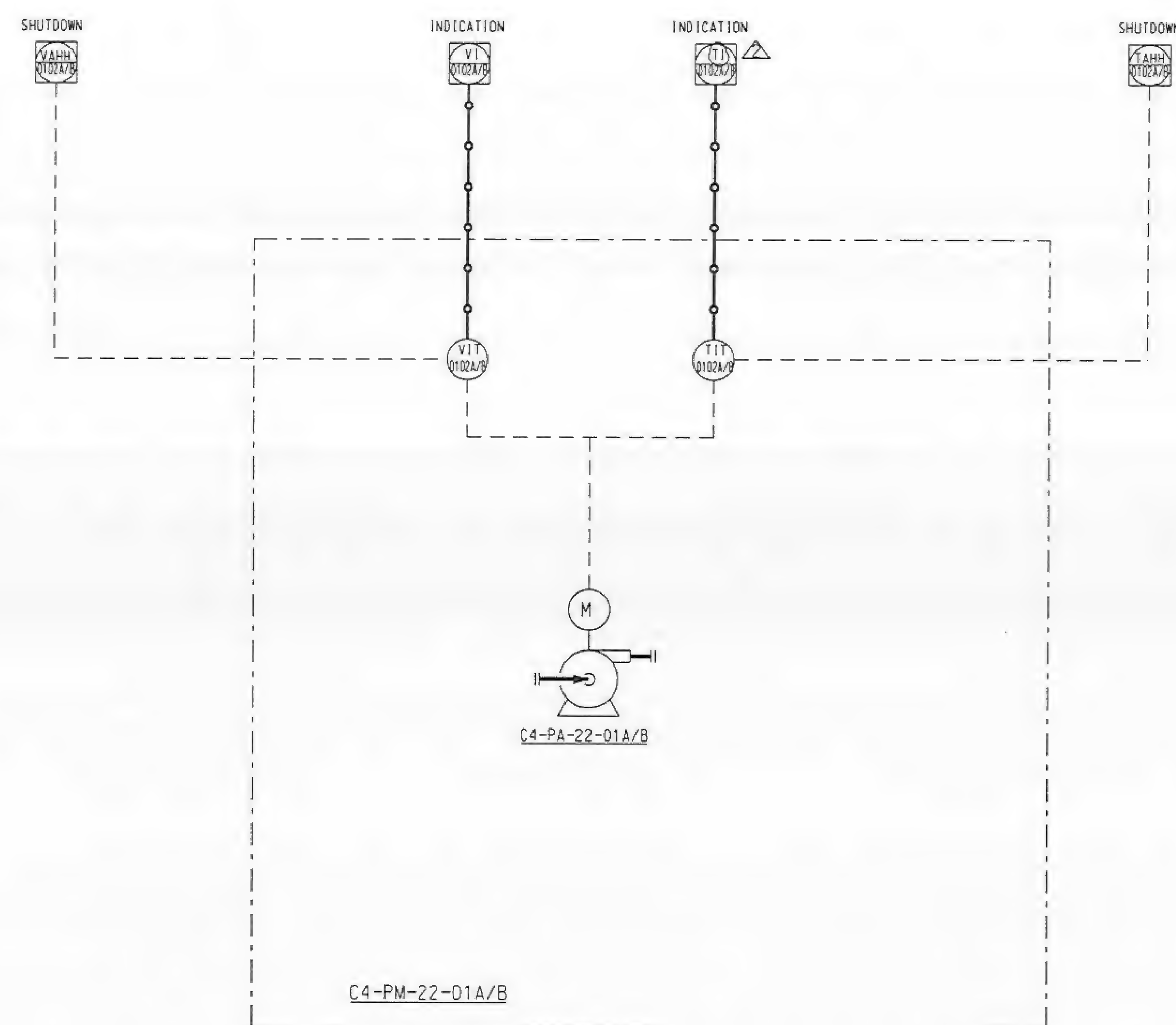
JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-022	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-011	1/1	2

CAD FILE NAME: C4DCC22011

C4-PM-22-01A/B(1W+1S)
DRIVES FOR CRUDE OIL EXPORT PUMPS
POWER : 850KW

C4-YB-22-01
EOT CRANE
CAPACITY : 5 TON



NOTES

1. DETAILED P&ID FOR BOOSTER PUMPS VIBRATION AND TEMPERATURE MONITORING WILL BE DONE BY VENDOR.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-14-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
2	17 Mar'10	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR
CH2MHILL

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

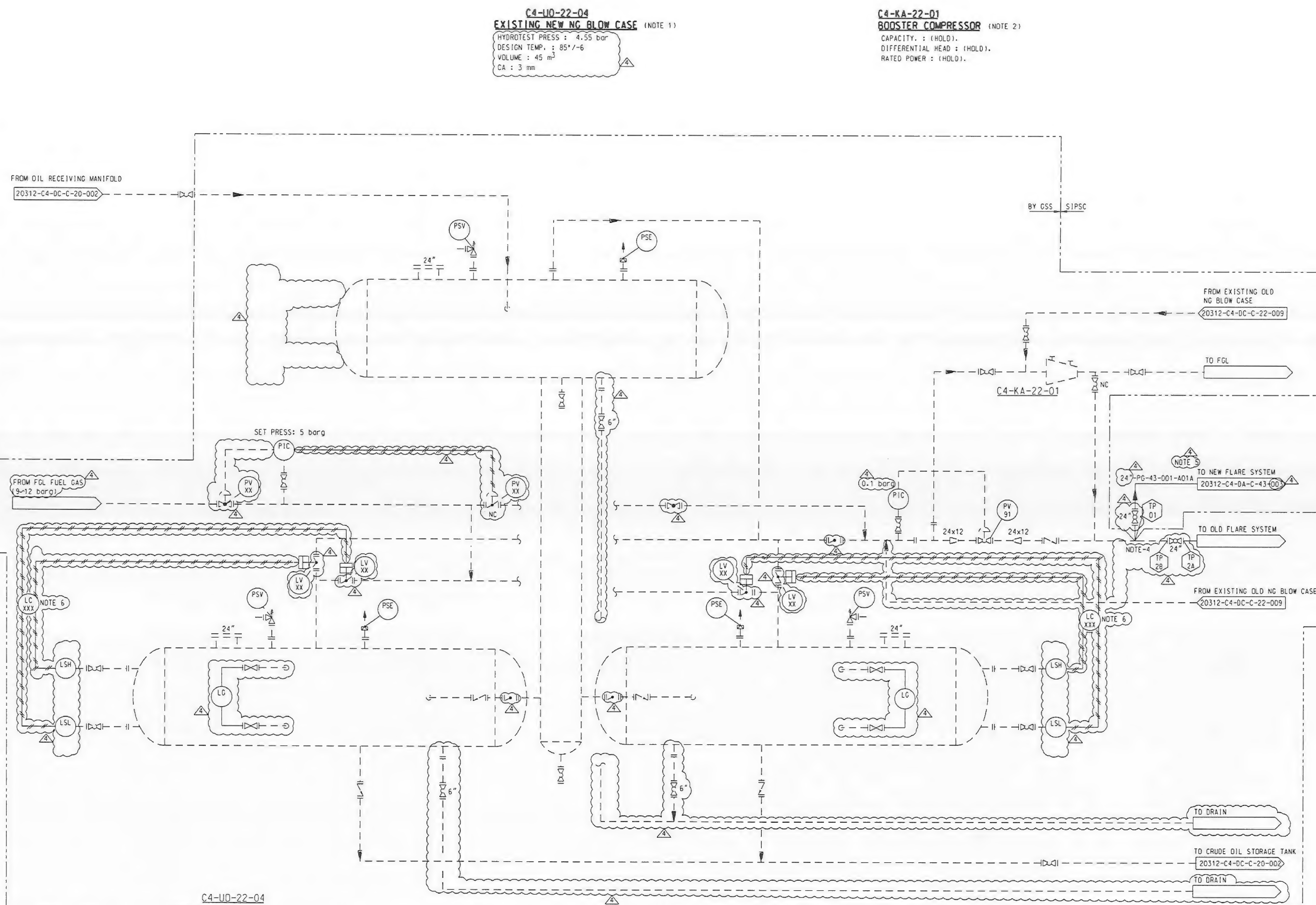
PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
CRUDE OIL EXPORT PUMPS DRIVES
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-023	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-012	1/1	2

CAD FILE NAME: C4DCC22012



NOTES

1. NEW NG BLOW CASE IS EXISTING EQUIPMENT & SIPSC TO ENSURE DETAIL SHOWN IN THE CONSEPTUAL SKETCH WITH TIE IN POINTS FOR NEW FLAIR SYSTEM WITH GSS PRODUCTION.
2. GSS TO PROVIDE ALL DESIGN PRAMETERS. OF THIS BOOSTER COMPRESSOR AS IT IS AN EXISTING EQUIPMENT.
3. ALL TIE-IN POINT NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 22 & P&ID NUMBER 013.
4. TIE IN TP-01 WILL BE HOT TAPPED. ADEQUACY OF LINE FOR HOT TAP WILL BE CONFIRMED BY SIPSC/GSS BEFORE HOT TAP OPERATION.
5. DO NOT PROVIDE LOOP IN FLARE HEADER. 4
6. LOCAL MOUNTED PNEUMATIC CONTROLLER.
7. LEVEL SWITCHES ON INTERMITTANT PRESSURIZATION COMPARTMENT & LOCAL MOUNTED PNUMATIC CONTROLLER TO BE SUPPLIED BY GSS.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002 4
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

14

HOLD LIST :

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
4	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
3	03 Jun'09	REISSUED FOR "CONSTRUCTION"	GDH	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GDH	SMD	SB	LM	WDF
1	24 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
EXISTING NEW NG BLOW CASE
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-019	SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-22-013	SHT 1/1 · REV 4

CAD FILE NAME: C4DCC22013

FROM CRUDE OIL
STORAGE TANK
20312-C4-DC-C-22-010

EXISTING BOOSTER
AND EXPORT PUMPS



14"-DC-22-038-A03A

TO CUSTODY TRANSFER
METERING SKID
20312-C4-DC-C-22-006

NOTE 2

EXISTING PIG
LAUNCHING STATION

OIL EXPORT TO IN-AMENAS
20312-C4-DC-C-22-006

NOTES

1. ALL SPECIALITY ITEM TAG NUMBER ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 22 & P&ID NUMBER 014.
2. AFTER CUSTODY TRANSFER METERING SKID IS PUT INTO USE.ALL THE BYPASS SHOULD BE DISMANTLED.

15

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

REFERENCE DRAWINGS	
EXPORT PUMP, METERING & CALIBRATION SYSTEM	ZR02-DWG-C4-PR-01-003

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	24 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	23 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID

EXISTING EXPORT PUMPS AND PIG LAUNCHING STATION

OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-024	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-22-014	1/1	3

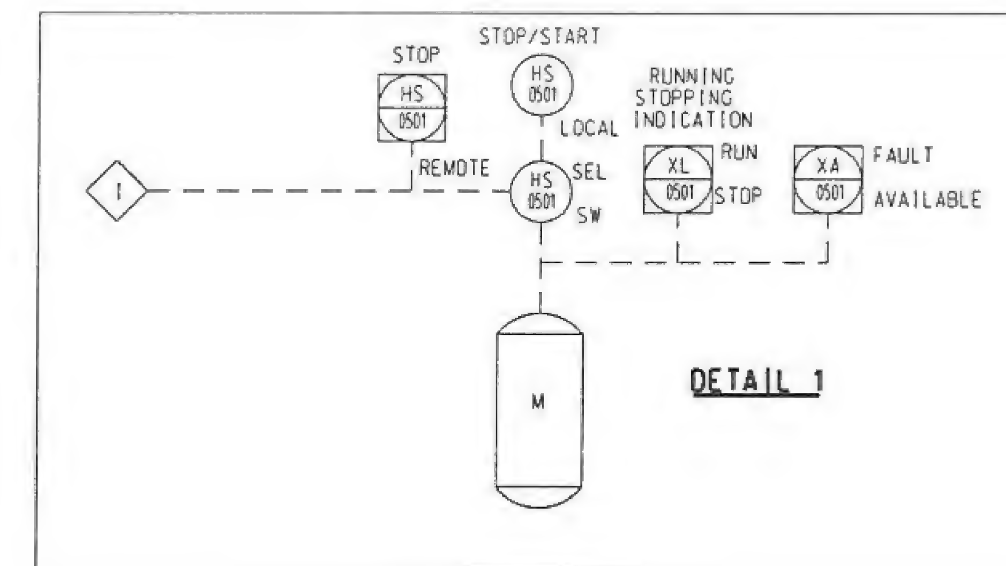
CAD FILE NAME: C4DCC22014

C4-UZ-30-01
SLOP OIL RECOVERY UNIT

CAPACITY : 6m^3
SIZE : 2 m(L) x 1 m(W) x 3.5 m(H)
DESIGN PRESS : ATM
DESIGN TEMP : 85/-6°C
MOC : CONCRETE INTERNALLY COATED WITH GLASS GLASS FLAKES EPOXY
TRIM : DC-C4-PN-30-01-A01A

C4-PN-30-01
SLOP OIL PUMP

FLOW RATE : 6 m^3/hr
DISCHARGE DESIGN PRESSURE : 3.5 barg
DIFF. HEAD : 43 mlc
DESIGN TEMP. : 85/-6°C
MOTOR : 3 kW
TYPE : VERTICAL PUMPS



NOTES

1. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIX WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
2. VALVE TO BE INSTALLED IN PIT & VALVE STEM TO BE EXTENDED UPTO GROUND LEVEL FOR EASY ACCESS.
3. VENT TO SAFE LOCATION.

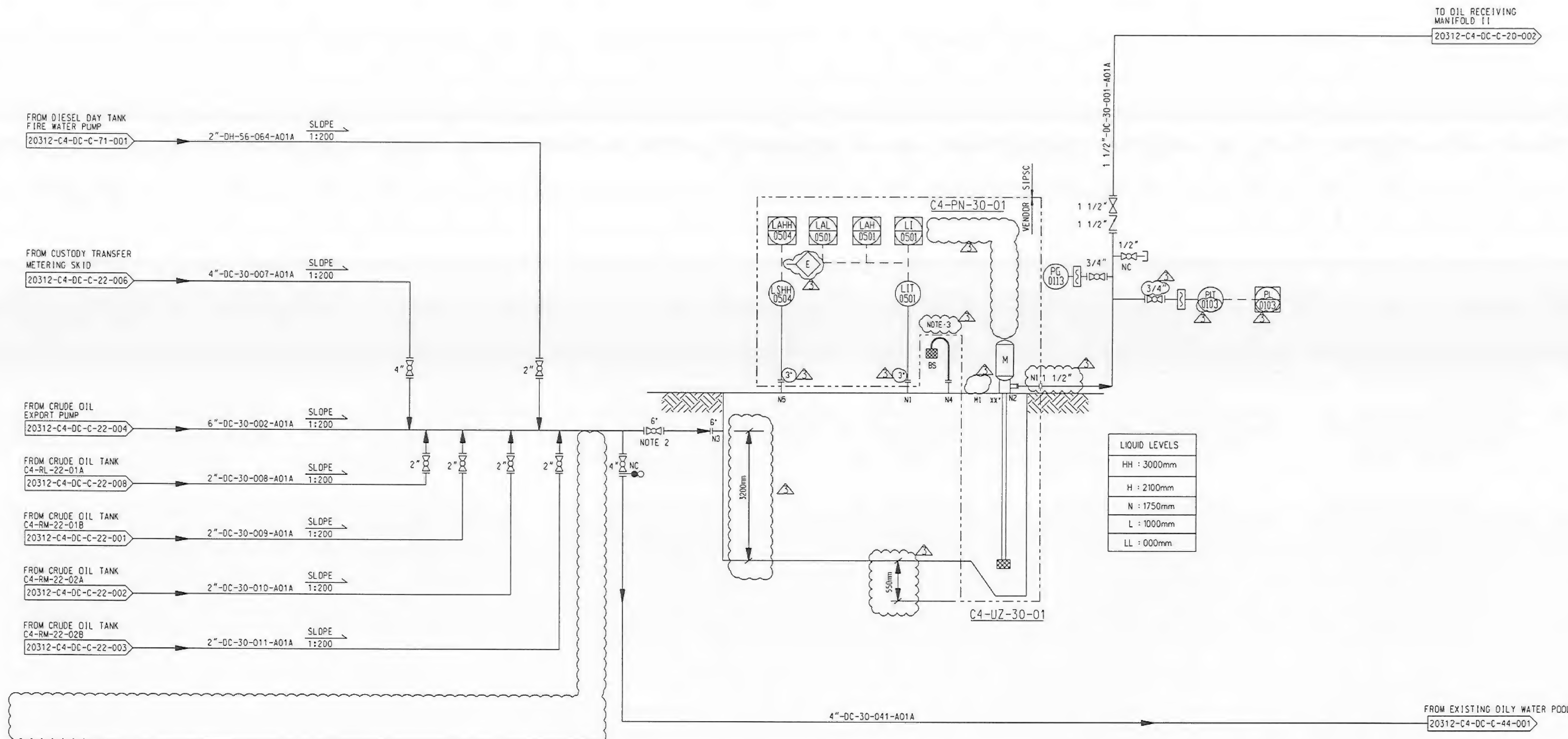
16

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.



REFERENCE DRAWINGS	
EXPORT PUMP, METERING & CALIBRATION SYSTEM	ZR02-DWG-C4-PR-01-003

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	24 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

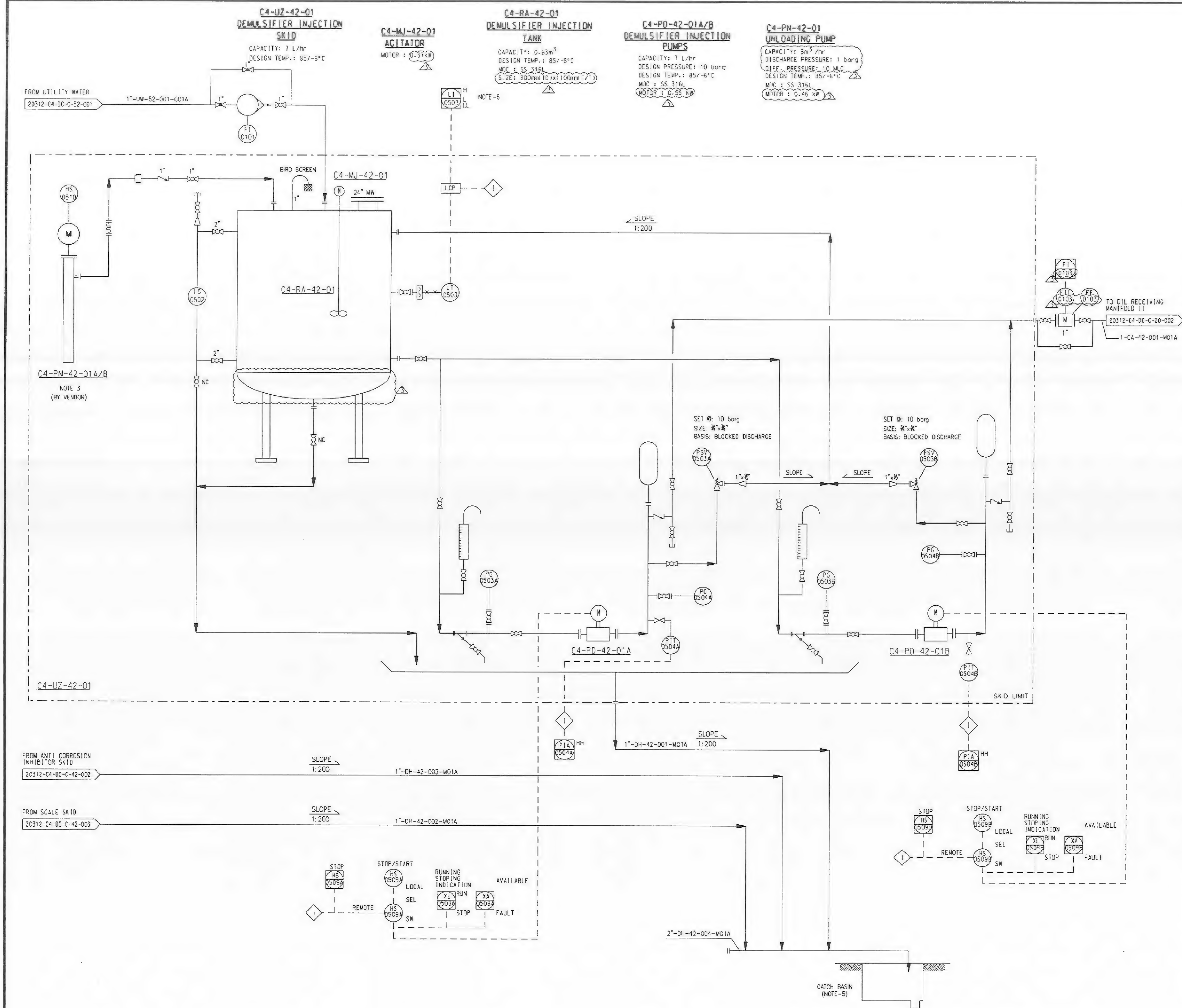
PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
SLOP OIL RECOVERY SYSTEM
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-011	SIZE	B

SCALE	PROJECT #	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-30-001	1/1	3

CAD FILE NAME: C4DCC30001



NOTES

1. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIX WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
2. SKID VENDOR TO FINALIZE ALL INSTRUMENTATION & CONTROL REQUIREMENT.
3. TWO COMMON PORTABLE UNLOADING PUMPS FOR ALL THE CHEMICAL INJECTION SKIDS IN C4 AREA.
4. THE P&ID IS INDICATIVE ONLY VENDOR TO FINALIZE DESIGN.
5. CATCH BASIN SIZE SHALL BE 800mmx500mmx500mm. IT IS SIZED TO HOLD SPILLAGE FROM ONE CHEMICAL DRUM OF 200L.
6. LOGIC FOR LEVEL.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	24 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

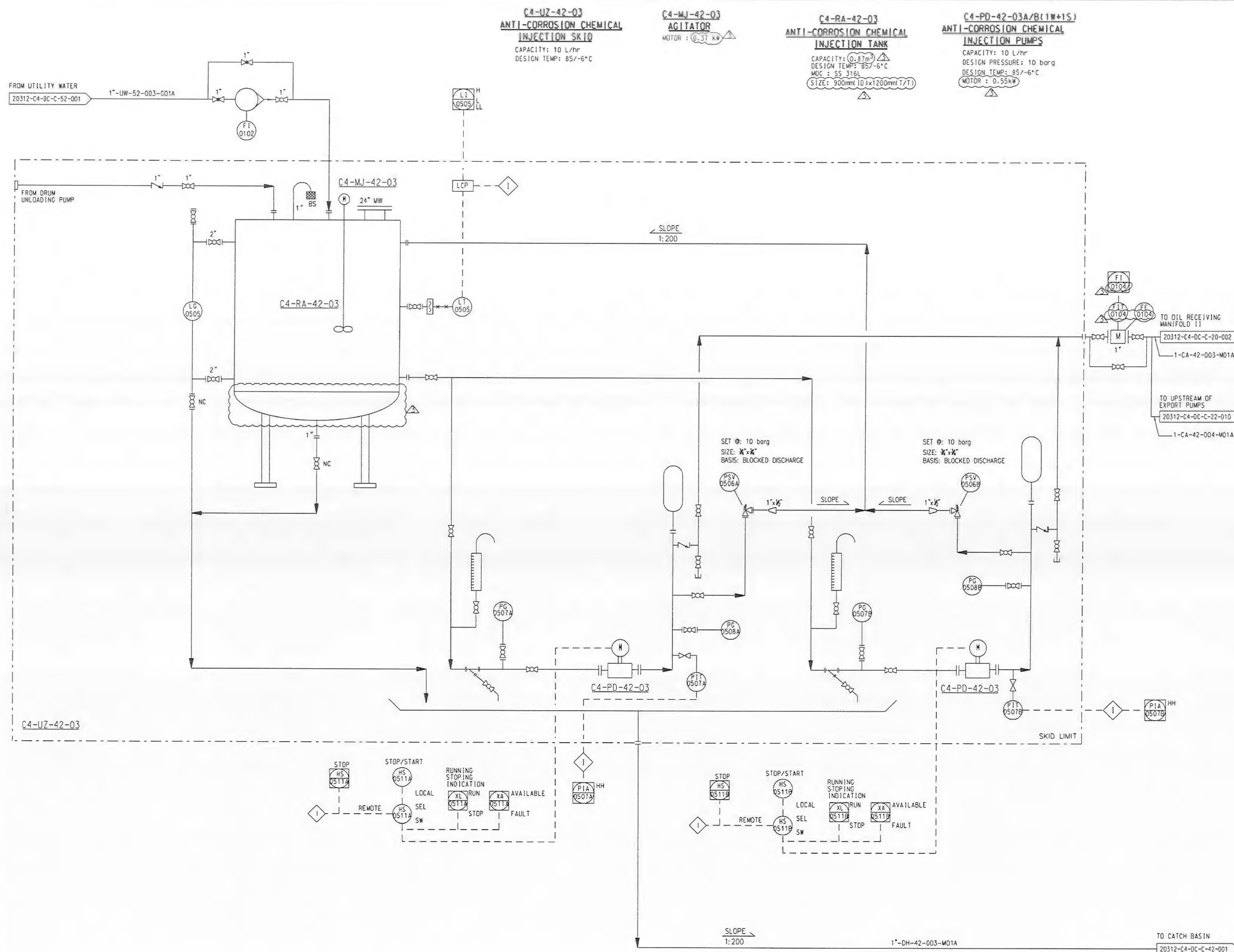
DRAWING TITLE

P & ID
DEMULSIFIER CHEMICAL INJECTION SKID
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-020	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-42-001	1/1	3

CAD FILE NAME: C4DCC42001



NOTES

1. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER BT.
2. SKID VENDOR TO FINALIZE ALL INSTRUMENTATION & CONTROL REQUIREMENT.
3. THE P&ID IS INDICATIVE ONLY VENDOR TO FINALIZE DESIGN.
4. LOGIC FOR LEVEL.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	24 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

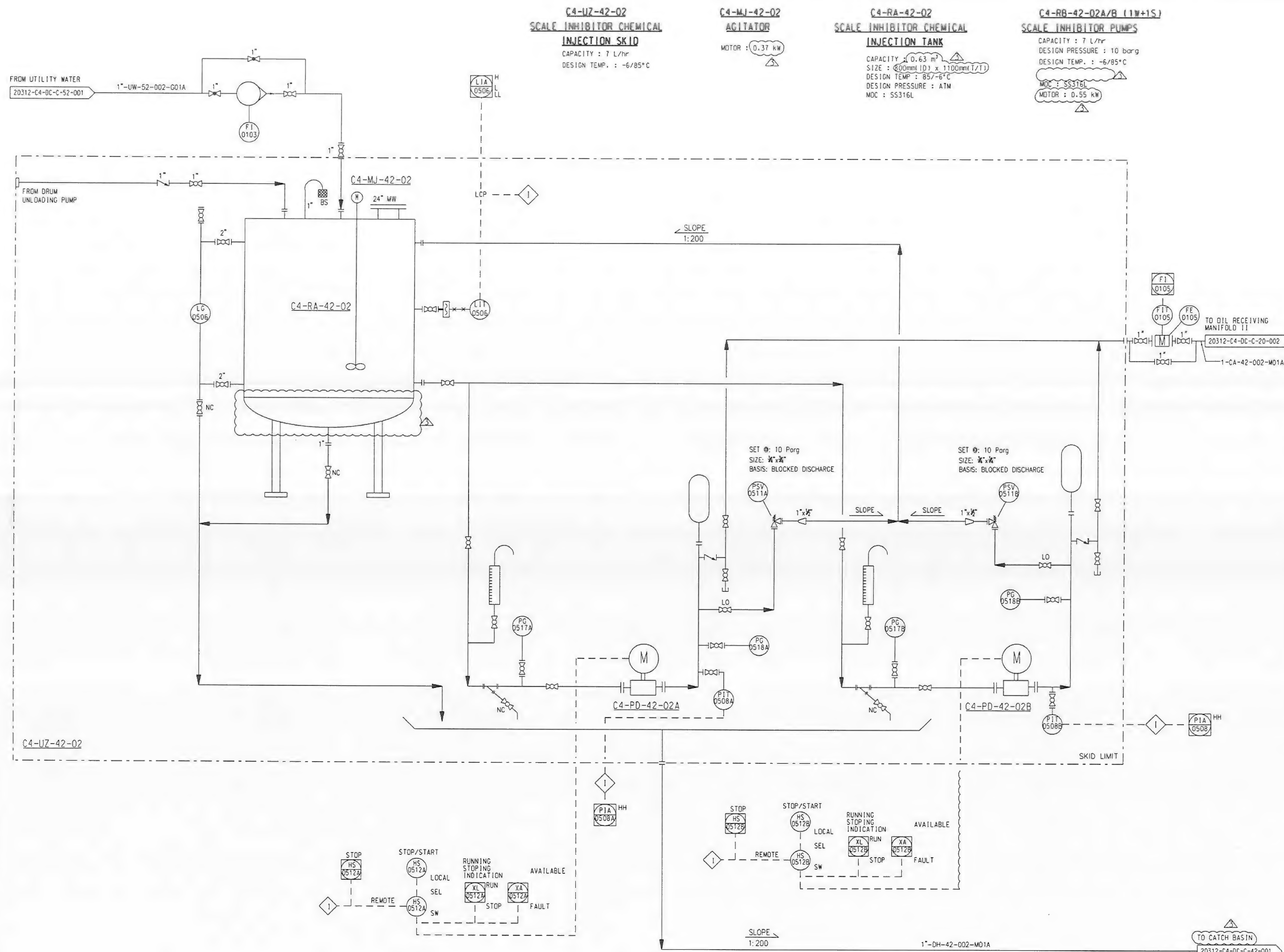
DRAWING TITLE

P & ID
ANTI-CORROSION CHEMICAL INJECTION SKID
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-021	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-42-002	1/1	3

CAD FILE NAME: C4DCC42002



NOTES

1. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIX WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
2. SKID VENDOR TO FINALIZE ALL INSTRUMENTATION & CONTROL REQUIREMENT.
3. THE P&ID IS INDICATIVE ONLY VENDOR TO FINALIZE DESIGN.
4. LOGIC FOR LEVEL.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	24 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	23 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

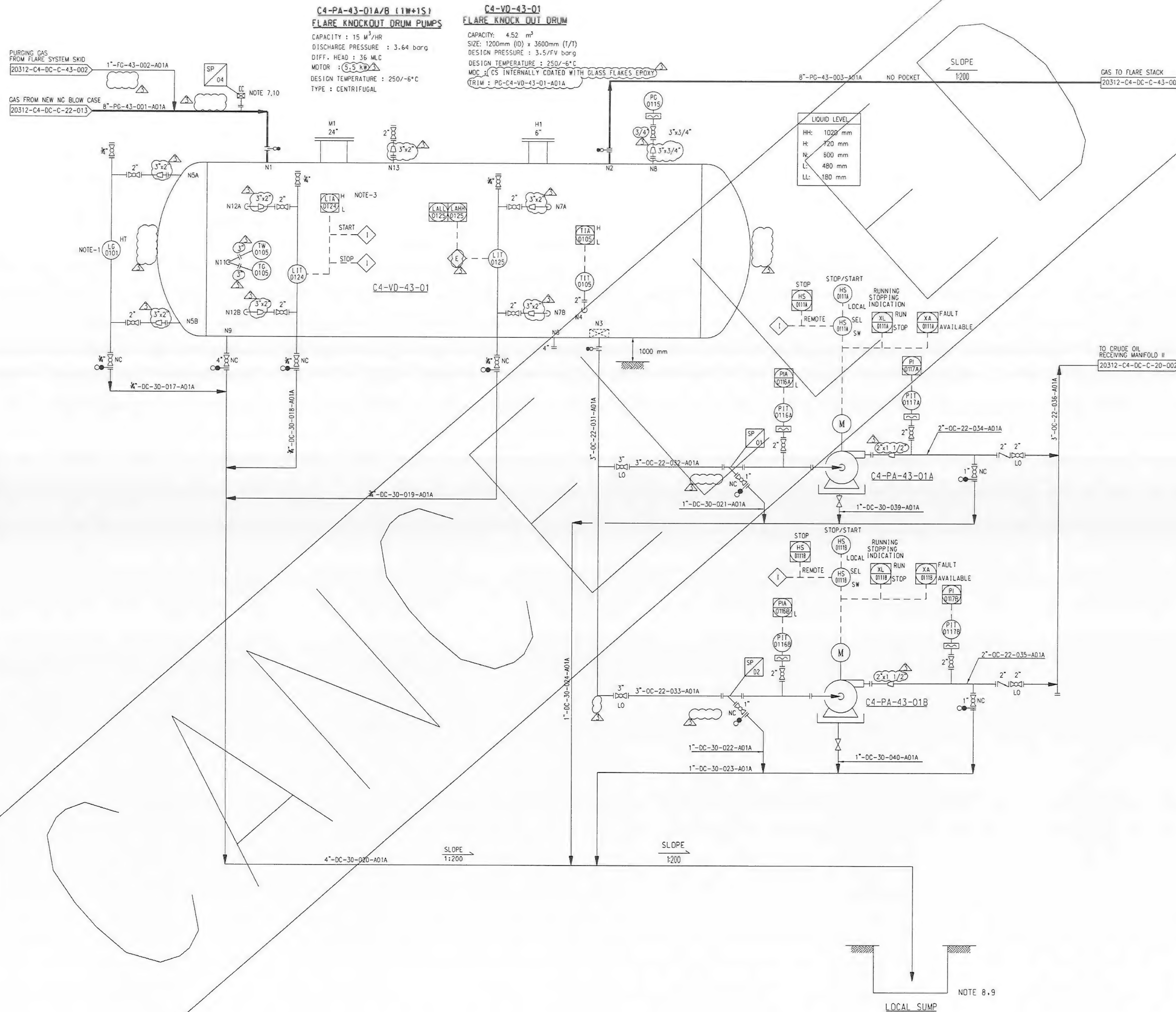
PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
SCALE CHEMICAL INJECTION SKID
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-025	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-42-003	1/1	3

CAD FILE NAME: C4DCC42003



NOTES

1. MAGNETIC TYPE LEVEL GAUGE.
2. VESSEL BOTTOM SHALL BE MIN. XXm(HOLD) FROM THE PUMP CENTRE LINE.
3. PUMP OPERATION PHILOSOPHY SHALL BE AS FOLLOWS:
   - LOW LEVEL BOTH PUMPS SHALL STOP,
   - HIGH LEVEL DUTY PUMP SHALL START,
   - HIGH HIGH LEVEL BOTH DUTY AND STANDBY PUMPS SHALL START,
   - LOW LEVEL BOTH DUTY AND STANDBY PUMPS SHALL TRIP.
   - HIGH HIGH LEVEL BY LIT 0125 SHALL START BOTH DUTY & STANDBY PUMP.
   - LOW LOW BY LIT 0125 SHALL TRIP BOTH DUTY & STANDBY PUMP.
4. DELETED.
5. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
6. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 43 & P&ID NUMBER 001.
7. REQUIREMENT OF CORROSION COUPEN WILL BE CONFIRMED AFTER RECIEPT OF CORROSION SPECILIST REPORT.
8. THIS SUMP SHOULD BE PROVIDED WITH FENCE.
9. THE SUMP SIZE IS 1000mmx1000mmx800mm.
10. FLUSH MOUNTED CORROSION COUPON (CC) AT 12 O' CLOCK POSITION.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	09 Nov'09	ISSUED FOR "CANCELLED"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID

FLARE KNOCK OUT DRUM AND PUMPS

OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-015	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-43-001	1/1	3

CAD FILE NAME: C4DCC43001

C4-UZ-43-01
FLARE SYSTEM SKID

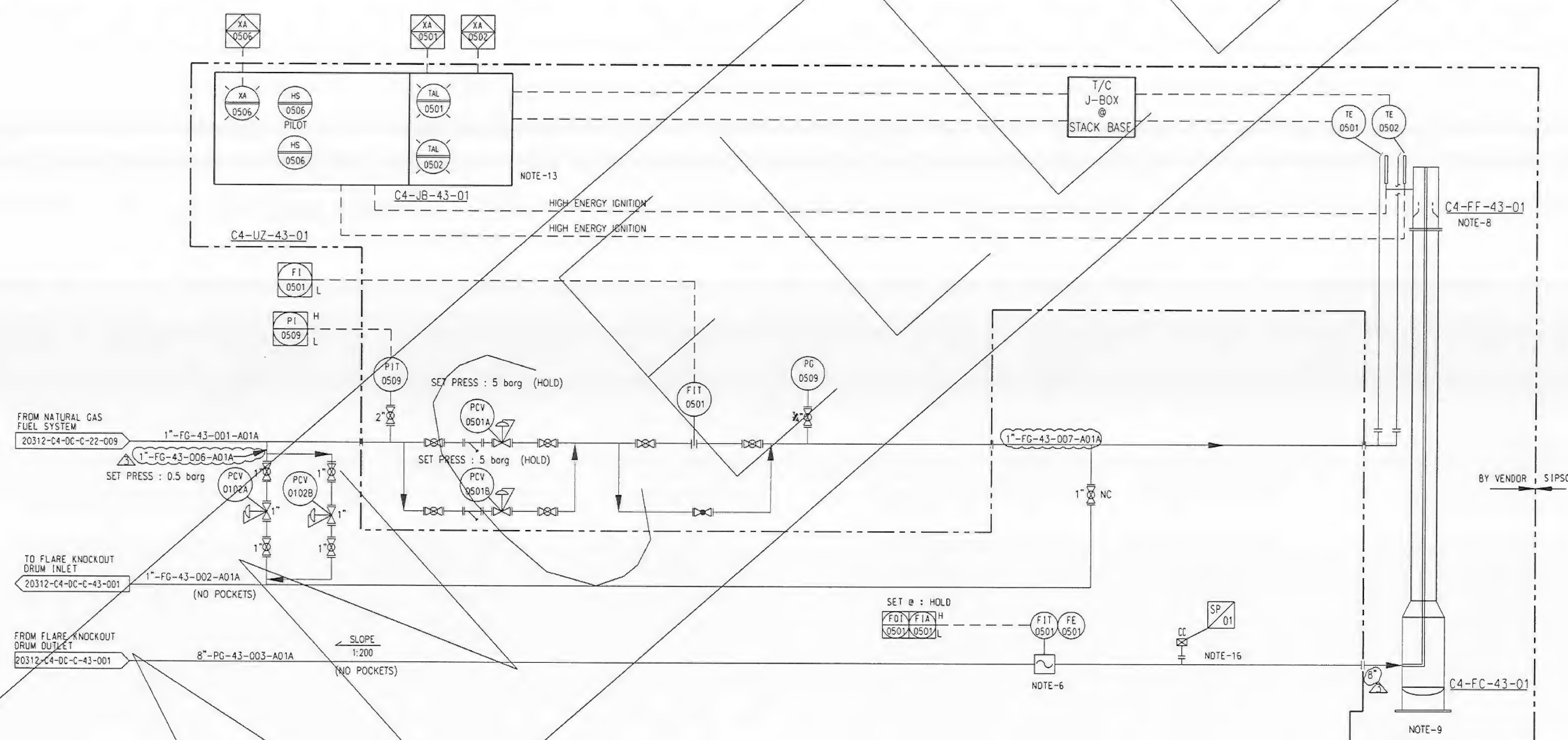
C4-JB-43-01
ELECTRONIC FLARE IGNITION SYSTEM

CPIE-FF-43-01
FLARE TIP WITH VELOCITY SEAL

SIZE: 10" (ID) X 20m (T/T) (HOLD)

C4-FC-43-01
FLARE STACK (NOTE-2)

CAPACITY: 6593 kg/hr
SIZE: 4" FLARE TIP DIAMETER (HOLD)
DESIGN PRESSURE : 3.5 barg/FV
DESIGN TEMPERATURE : 250°/-6°C
HEIGHT OF FLARE STACK: 20 m
DIA : 200 mm



NOTES

1. FLARE STACK HEIGHT 20M VENDOR TO VERIFY THE SIZING BASED ON AND DISPERSION CRITERIA AS PER API 521.
2. FLARE STACK SHALL BE LOCATED FAR FROM THE FACILITIES AND AWAY FROM THE WIND DIRECTION AND SHALL BE VISIBLE FROM THE CONTROL ROOM.
3. 100% SMOKELESS FLARING AT ALL RELEASING RATES.
4. ALL ESD BUTTON SHALL BE LOCATED STRATEGICALLY AND AWAY FROM HEAVY PERSONNEL TRAFFIC TO AVOID ACCIDENTAL INITATION.
5. EACH PILOT WILL BE MONITORED BY A SINGLE THERMOCOUPLE. THE THERMOCOUPLE TYPE AND CONFIGURATION WILL BE SPECIFIED BY THE FLARE VENDOR.
6. ULTRASONIC FLOW METER SUPPLIED BY VENDOR.
7. DELETED.
8. FLARE TIP TO BE PROVIDED WITH VELOCITY SEAL.
9. VENDOR TO DESIGN THE FLARE FOR SMOKLESS EMISSION AS PER LOCAL ALGERIAN GOVT. RULES & REGULATIONS.
10. THE NUMBER OF FUEL GAS LINES FOR PILOT BURNER AND SIZES ARE TO BE CONFIRMED BY VENDOR. LINES SHOWN ARE INDICATIVE ONLY.
11. DELETED.
12. ALL ELECTRONIC TRANSMITTERS TO BE PROVIDED WITH INTEGRAL INDICATORS.
13. THE LOCAL CONTROL IGNITION PANEL WILL BE LOCATED OUTSIDE STERILE AREA.
14. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C & SYSTEM NUMBER 87.
15. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 43 & P&ID NUMBER 002.
16. FLUSH MOUNTED CORROSION COUPON (CC) AT 12 O' POSITIONS.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01_03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1-3. DELETED.
4. DELETED.
5. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	ISSUED FOR "CANCELLED"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GOH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

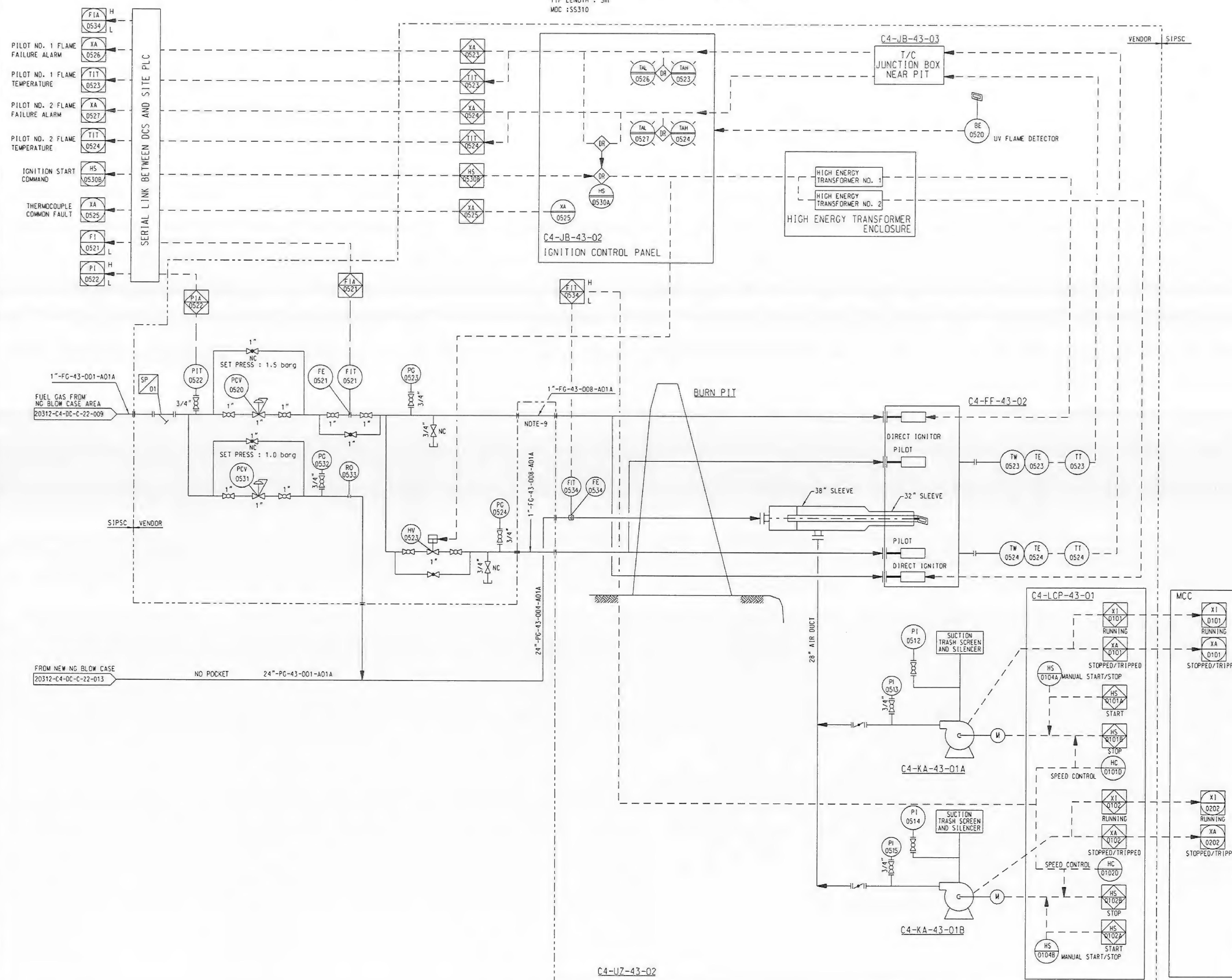
DRAWING TITLE

P & ID
FLARE STACK
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-016	SIZE	B

SCALE	PROJECT #	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-43-002	1/1	3

CAD FILE NAME: C4DCC43002



NOTES

1. SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 43 & P&ID NUMBER 003.
2. FLARE TIP SHALL BE SIMPLY EXTENDED AS A SOARE CUT OPEN-ENDED PIPE. EXTENSION SHALL ALIGN THE TIP WITH THE FOUR NEWLY INSTALLED VELOCITY SEAL FLARE TIPS.
3. ALL THE AIR ASPIRATORS ARE LOCATED INSIDE THE PILOT IGNITOR SLEEVES AND ARE PART OF FLARE TIP VENDOR'S SUPPLY.
4. NEW PILOT GAS/AIR ASSEMBLY INSTALLED IN NEW PIPE CARRIER SLEEVES SHALL BE HELD CENTRAL TO PIPE SLEEVES BY RETRACTABLE SPIDER ARRANGEMENT.
5. THERMOCOUPLES ARE DUPLEX AND BOTH SHALL BE WIDER UPTO THE T/C SWITCH PANEL.
6. ALL INSTRUMENT TAG NUMBER SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
7. ALL INDICATIONS DISPLAYED IN THE IGNITION PANEL ARE SERIAL LINK GO TO DCS.
8. INDIVIDUAL FAULT ALARM FOR EACH THERMOCOUPLE WILL BE DISPLAYED IN THIS DCS. A COMMON FAULT ALARM FOR EACH FLARE WILL BE DISPALYED IN THE IGNITION PANEL.
9. INTERCONNECTING PIPING BY ENGINEERING CONTRACTOR.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
1	21 Mar'10	ISSUED FOR CONSTRUCTION	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL VECO Engineering

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
BURN PIT SYSTEM
OIL PROCESS & STORAGE CENTRE

JOB CODE	20312	CLASS	R
CONTRACTOR DWG No.	20312-C4-ER21-044	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-43-003	1/1	1

CAD FILE NAME: C4DCC43003

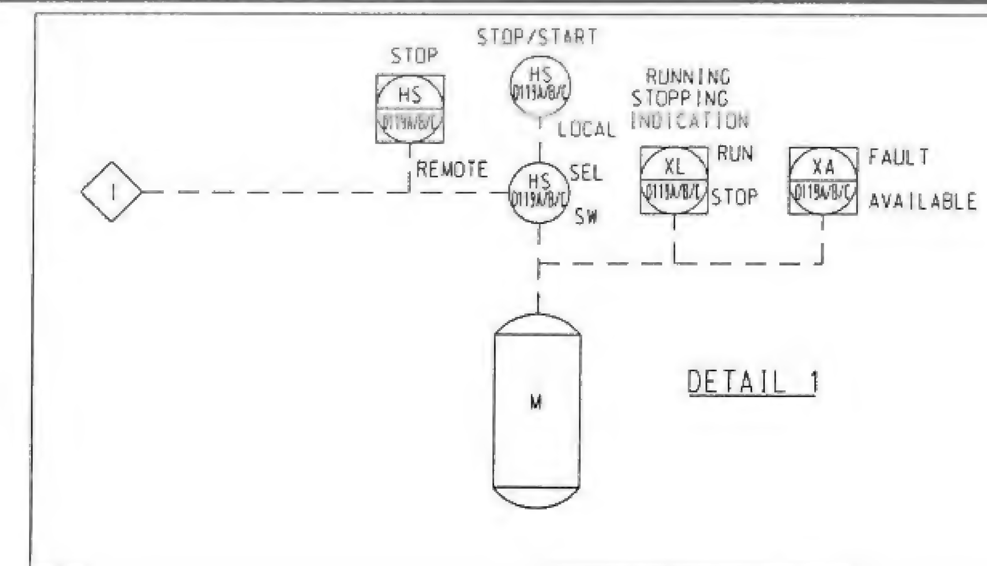
C4-PN-44-01A/B(2W+1S)
OILY WATER LIFT PUMPS NOTE 10

FLOWRATE : 140 m^3/hr
DISCHARGE PRESSURE : 5.55 barg
DIFF. HEAD : 52.4 MLC
DESIGN TEMP. : 85/-6°C
MOTOR : 45kw
TYPE : VERTICAL PUMP

C4-RP-44-01 (NOTE 7)
EXISTING OILY WATER POOL

L X B X H : 20m X 4m X 2.25m
MOC : CONCRETE INTERNALLY COATED WITH GLASS FLAKES EPOXY
TRIM : PW-C4-RP-44-01-A01AX

LIQUID LEVELS
HH : 1500mm
H : 1200mm
L : 600mm
LL : 300mm



FROM EXISTING OIL STORAGE TANK P4
FROM EXISTING OIL STORAGE TANK P1
FROM EXISTING OIL STORAGE TANK P3
FROM SLOP OIL RECOVERY UNIT 20312-C4-DC-C-30-001 — 4"-DC-30-041-A01A
FROM POTABLE WATER TANK C4-VL-52-01 20312-C4-DC-C-52-001 — 3"-DH-52-058-G01A
FROM METER PROVER SKID 20312-C4-DC-C-22-007 — 3"-DH-56-005-A01A
FROM CRUDE OIL STORAGE TANK C4-RM-22-02B 20312-C4-DC-C-22-003 — 2"-DH-56-097-Z01A
FROM CRUDE OIL TANK C4-RM-22-02B 20312-C4-DC-C-22-003 — 4"-DH-56-040-Z01A SLOPE 1:200
FROM CRUDE OIL TANK C4-RM-22-02A 20312-C4-DC-C-22-002 — 4"-DH-56-030-Z01A SLOPE 1:200
FROM CRUDE OIL TANK C4-RM-22-01B 20312-C4-DC-C-22-001 — 4"-DH-56-020-Z01A SLOPE 1:200
FROM EXISTING CRUDE OIL TANK C4-RL-22-01A 20312-C4-DC-C-22-008 — 4"-DH-56-010-Z01A SLOPE 1:200
FROM OIL RECEIVING MANIFOLD III 20312-C4-DC-C-20-003 — 10"
OILY WATER FROM OIL TANK C4-RM-22-01A/B 20312-C4-DC-C-22-001 — 8"-PW-44-001-Z01A SLOPE 1:200
FROM CRUDE OIL STORAGE TANK C4-RM-22-02B 20312-C4-DC-C-22-003 — 8"-PW-44-003-Z01A
OILY WATER FROM OIL TANK C4-RM-22-02A 20312-C4-DC-C-22-002 — SLOPE 1:200 8"-PW-44-002-Z01A
FROM CS4 PRODUCE WATER 20312-CS4-DC-C-44-001 — SLOPE 1:200 6"-PW-44-010-Z01A
PIPELINE | C4 AREA

TO EXISTING EVAPORATION POOL
JET CLEANING CONNECT — SP 02 — NOTE 8
A01AX | Z01A — C4 AREA | PIPELINE
8"-PW-44-006-A01AX — 8"-PW-44-007-Z01A
TO PRODUCED WATER TREATMENT CENTER 20312-CTE-DC-C-44-001
6"-PW-44-004-A01AX — 6"-PW-44-011-A01AX — 6"-PW-44-005-A01AX
SEE DETAIL 1 — SEE DETAIL 1 — SEE DETAIL 1
LAHH 0127 — LALL 0128 — LI 0129 — NOTE 1 — LIT 0127 — LIT 0128 — LIT 0129 — START — STOP
PG 0119A — PG 0119C — PG 0119B — SP 01 — NOTE 9
C4-PN-44-01A — C4-PN-44-01C — C4-PN-44-01B
N7 — N8 — N9 — N10 — N11 — N12 — N13 — HOLD — FOLLOW SITE
C4-RP-44-01
BY GSS IN FUTURE | SIPSC
6"-DH-44-012-Z01A — SLOPE 1:200 — N14
NOTE 11 — SLOPE 1:200 — 8"-PW-44-012-Z01A — N2 — N1
NOTE 1.2 — NOTE 1.2 — NOTE 1.2 — NOTE 4

NOTES

1. PUMP OPERATION PHILOSOPHY SHALL BE AS FOLLOWS
   - HIGH LEVEL SHALL START DUTY PUMP
   - HIGH HIGH LEVEL SHALL START STANDBY PUMP (THIS REQUIREMENT IS MANNY FOR FUTURE CASE AFTER INSTALLATION OF THIRD PUMP)
   - LOW LEVEL SHALL STOP PUMPS.
   - LOW LOW LEVEL SHALL TRIP BOTH DUTY STANDBY PUMPS.
2. VERTICAL PUMPS C4-PW-44-01A/B TO BE MOUNTED AT THE OPENING POSITION ON THE OPERATION PLATFORM FOR THE EXISTING PUMPS.
3. DELETED.
4. ALL THE DRAWINGS TO BE VERIFIED AT SITE FOR CONNECTION.
5. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 44 & P&ID NUMBER 001.
6. OILY WATER LIFT PUMP WILL WORK AS ONE WORKING & ONE STANDBY IN RECENT DAYS. BUT IN FUTURE WHEN THIRD PUMP WILL BE INSTALLED, IT WILL WORK AS TWO WORKING ONE STAND BY.
7. EXISTING OILY WATER POOL TO BE REVAMPED BY PROVIDING TIGHT SEAL COVERING.
8. THE JET CLEANING SUPPLY PRESSURE SHOULD NOT BE EXCEED 8 barg.
9. DUEL VENT TO BE LOCATED AT SAFE LOCATION.
10. TO BE CONNECTED EMERGENCY POWER.
11. EXISTING OILY WATER POOL NOZZLES N1,N2,N14 TO BE PROVIDED AT 1400mm HEIGHT FROM BOTTOM OF THE TANK.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.

REFERENCE DRAWINGS	
OILY WATER LIFT PUMP	ZR02-DWG-C4-PR-01-004

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	06 May'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

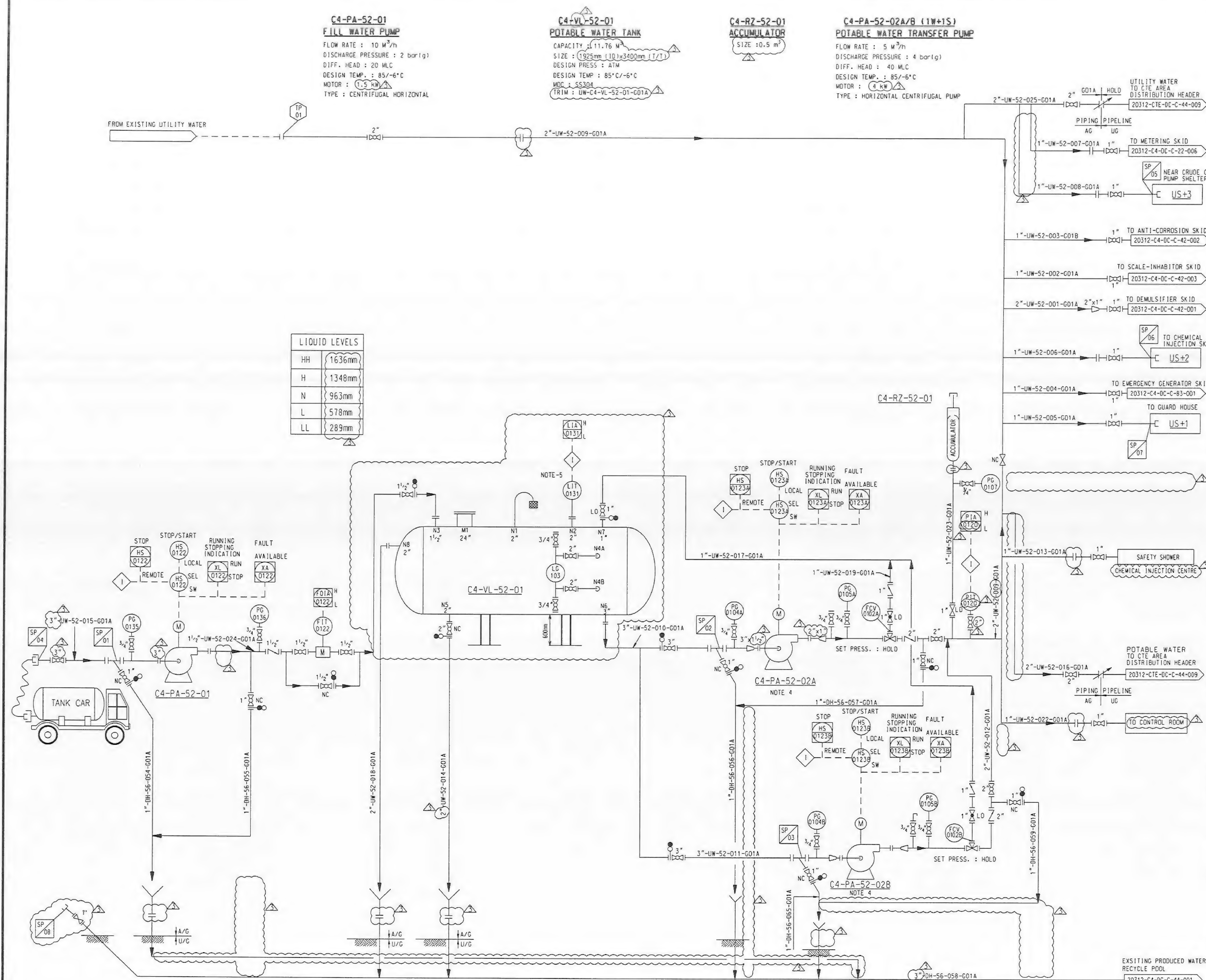
DRAWING TITLE
P & ID
OILY WATER LIFT PUMP
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A

CONTRACTOR DWG No.	SIZE
20312-C4-ER21-034	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-44-001	1/1	3

CAD FILE NAME: C4DCC44001



NOTES

1. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
2. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4 & SYSTEM NUMBER 52 & P&ID NUMBER 001.
3. ALL TIE-IN POINT NUMBERS ARE PREFIXED WITH AREA CODE C4. SYSTEM NUMBER 52 & P&ID NUMBER 001.
4. WHEN PIA-0101 SHOWS PRESSURE HIGH. STOP POTABLE WATER TRANSFER PUMP C4-PA-52-02A/B. WHEN PIA-0101 SHOWS PRESSURE LOW. START POTABLE WATER TRANSFER PUMP C4-PA-52-02A/B. WHEN ONE PUMP AMONG C4-PA-52-02A/B TRIPS & PIA-0101 SHOWS LOW PRESSURE THEN STANDBY PUMP WILL START AUTOMATICALLY.
5. LEVEL INDICATOR SHOULD BE MOUNTED AT GRADE LEVEL FOR CLEAR VISIBILITY.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. DELETED.
2. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	24 Feb'09	ISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
1	23 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE: P & ID UTILITY WATER SYSTEM OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-017	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-52-001	1/1	3

CAD FILE NAME: C4DCC52001

C4-PE-62-01
DIESEL UNLOADING PUMP

CAPACITY : 5 M^3/HR
DISCHARGE PRESSURE : 1.7 barg
DIFF. PRESSURE : 20 MLC
DESIGN TEMP. : 85/-6°C
MOTOR : KW (HOLD)
TYPE : GEAR PUMP

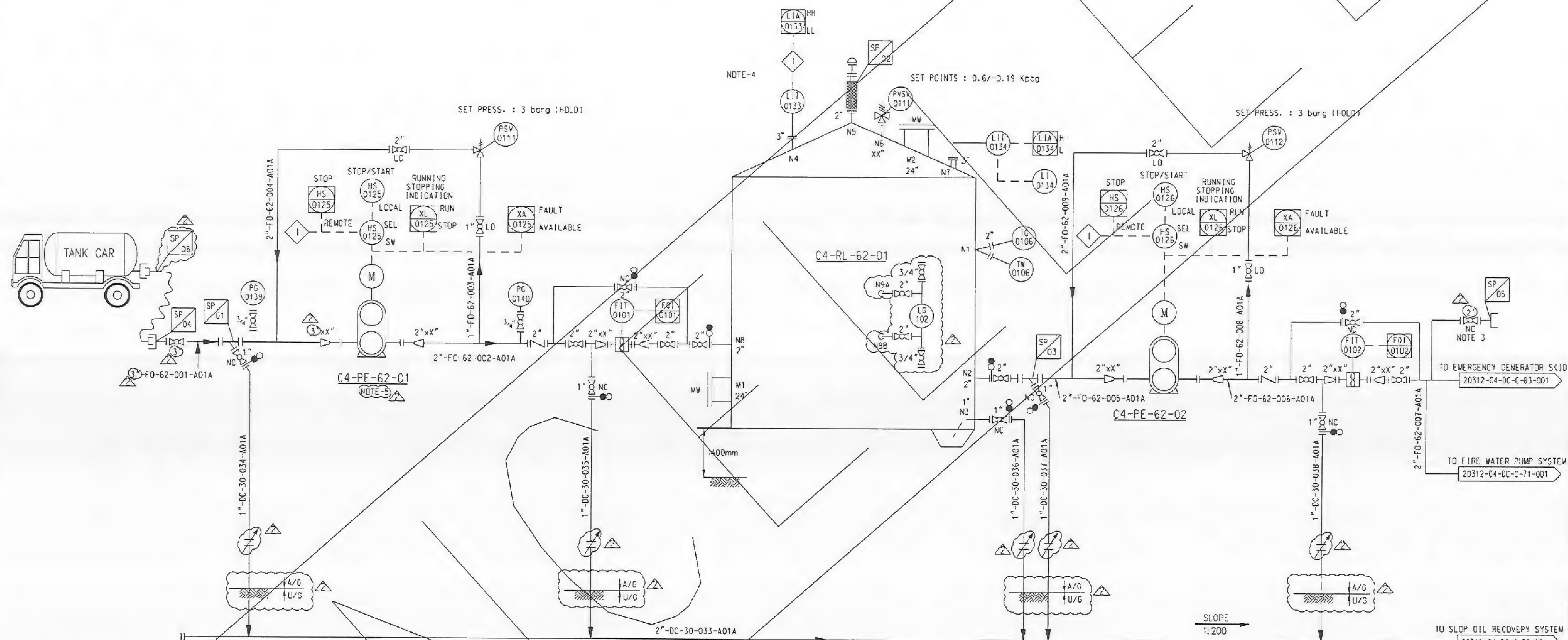
C4-RL-62-01
DIESEL STORAGE TANK

CAPACITY : 12.5 M^3
SIZE : 2500mm (ID)x2500mm (T/T)
DESIGN PRESSURE : 0.81/-0.216 KPAG
DESIGN TEMP : 85/-6°C
MOC : CS

C4-PE-62-02
DIESEL TRANSFER PUMP

CAPACITY : 3 M^3/HR
DISCHARGE PRESSURE : 1.7 barg
DIFF. PRESSURE : 20 MLC
DESIGN TEMP. : 85/-6°C
MOTOR : KW (HOLD)
TYPE : GEAR PUMP

LIQUID LEVELS	
HH	2125mm
H	1750mm
N	1250mm
L	1000mm
LL	375mm



NOTES

1. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIX WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 87.
2. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4 & SYSTEM NUMBER 62 & P&ID NUMBER 001.
3. PROVISION FOR FILLING THE DRUMS OF DIESEL REQUIRED FOR EMERGENCY GENERATOR SKID OF CPIE & NCPIE AREA.
4. LEVEL INDICATOR SHOULD BE MOUNTED AT GRADE LEVEL FOR CLEAR VISIBILITY.
5. EARTHING ARRANGEMENT FOR TANK CAR UNLOADIING TO BE PROVIDED WITH INTERLOCK FOR NOT TO START THE UNLOADING PUMP WHEN EARTHING IS NOT CONNECTED TO THE TANK CAR BEFORE STARLING THE UNLOADING.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST :

1. REDUCER & EXPANDER SIZES FOR INSTRUMENT & PUMPS
2. DELETED.
3. SET PRESSURE OF PSV AT PUMP DISCHARGE HOLD FOR VENDOR DATA.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	ISSUED FOR "CANCELLED"	AM	SMD	SB	LM	WDF
1	23 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

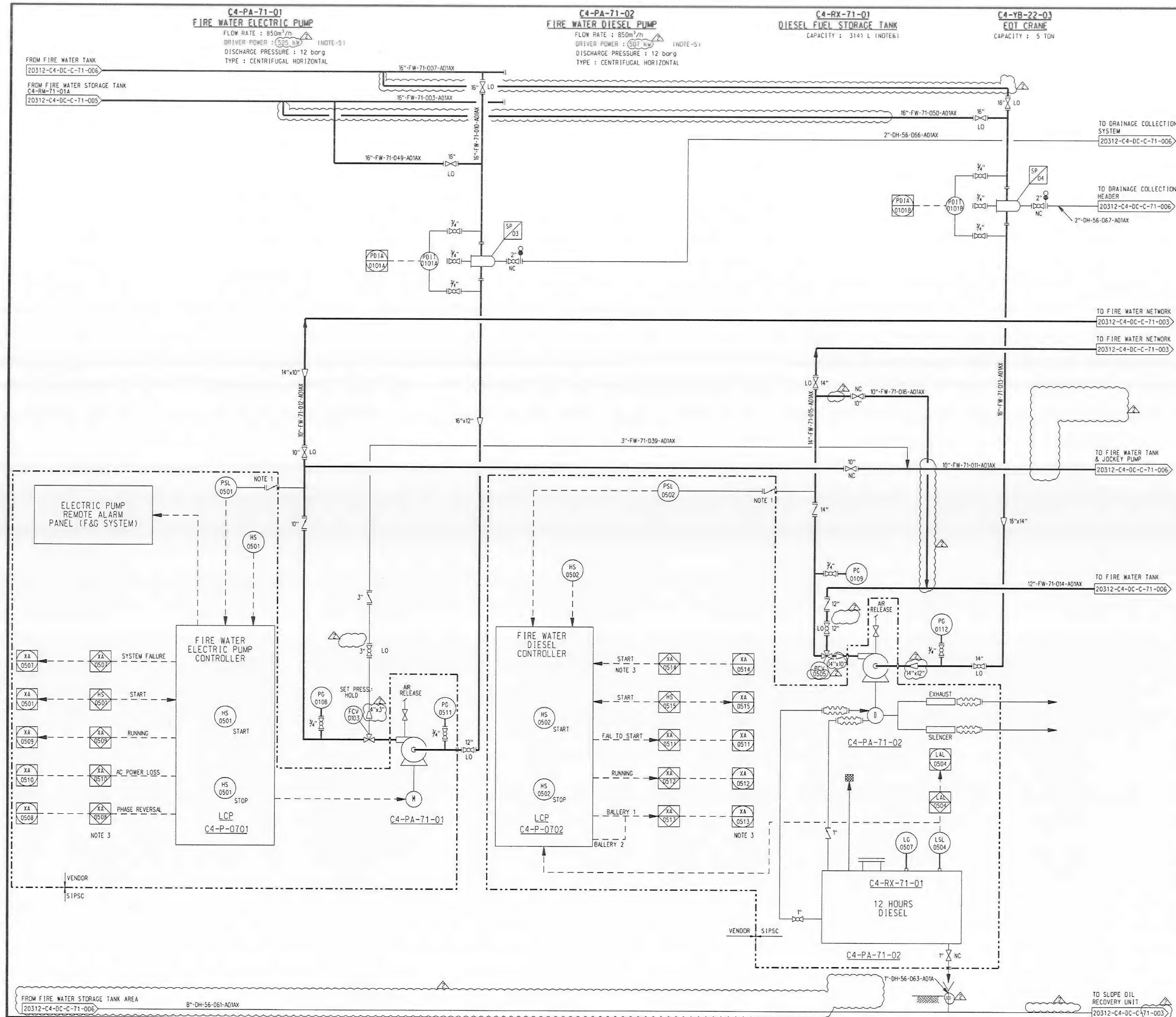
PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
DIESEL SYSTEM
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-035	SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-62-001	SHT 1/1 / REV 2

CAD FILE NAME: C4DCC62001



NOTES

1. CHECK VALVE WITH 3/32" ORIFICE IN FLOPPER.
2. WASTE CONE.
3. ALL ALARM SIGNALS TO BE HARDWIRED.
4. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 71 & PID NUMBER 001.
5. TO BE CONFIRMED BY VENDOR.
6. TANK CAPACITY IS CALCULATED FOR 12 Hrs CONTINUOUS BACK UP.

26

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF
1	22 Mar'09	ISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

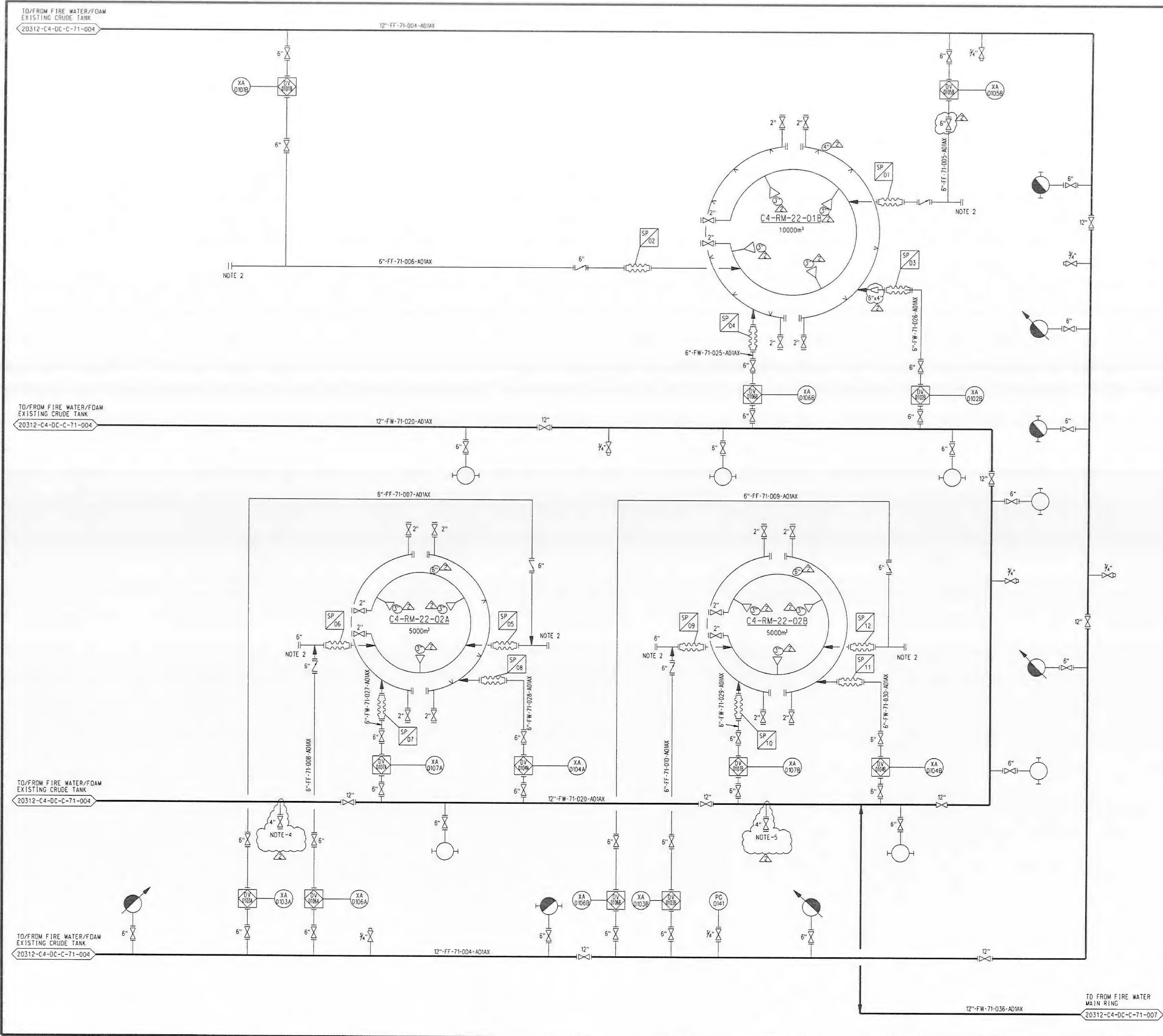
DRAWING TITLE P & ID

FIRE WATER ELECTRIC & DIESEL PUMPS OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-026	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-71-001	1/1	2

CAD FILE NAME: C4DCC71001



NOTES

1. UNDER GROUND PIPING REQUIRED FOR ROAD CROSSING.
2. PROVIDE BLIND WITH ¾" FNPT TAP FLANGE WITH DRAIN VALVE.
3. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 71 & PID NUMBER 002.
4. TAPPING FOR CONNECTING FUTURE FIRE WATER NETWORK FOR OLD NG BLOW CASE.
5. TAPPING FOR CONNECTING FUTURE FIRE WATER NETWORK FOR NEW NG BLOW CASE.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF
1	22 Mar'09	ISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF

REVISIONS

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

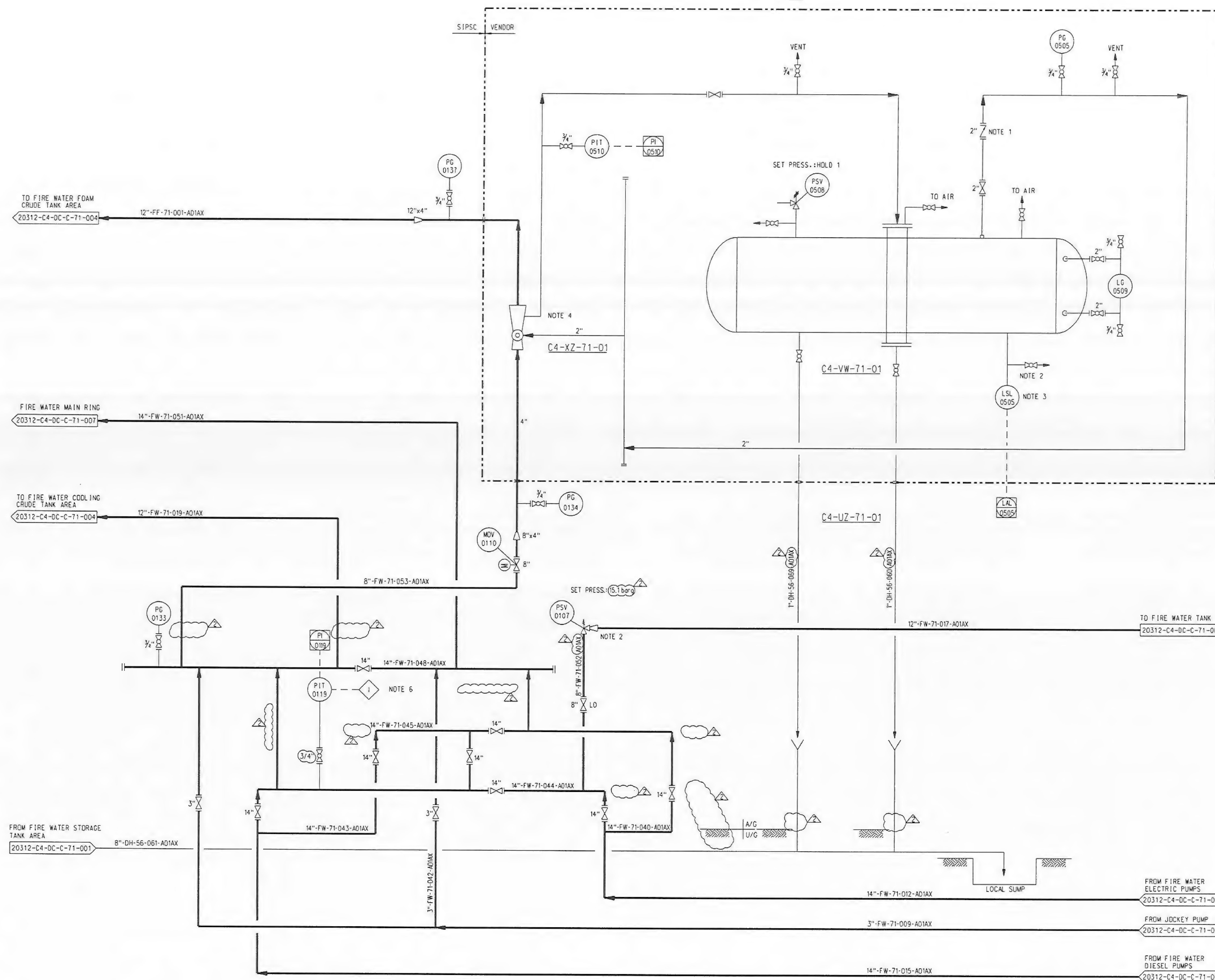
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
FIRE WATER/FOAM NEW CRUDE OIL TANKS
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-027	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-71-002	1/1	2

CAD FILE NAME: C4DCC71002



NOTES

1. VALVE WITH CALIBRATED WATER DIAPHRAGM.
2. FOAM CONCENTRATE FILLING AND DRAIN VALVE.
3. SET AT ½ TANK FULL.
4. THE FOAM SYSTEM SHALL BE DESIGNED WITH NFPA 11.
5. SIZING TO BE CONFIRMED BY VENDOR.
6. F&G SYSTEM.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01 03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	SMO	RB	SB	LM	WDF
1	22 Mar'09	ISSUED FOR "CONSTRUCTION"	SMO	RB	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

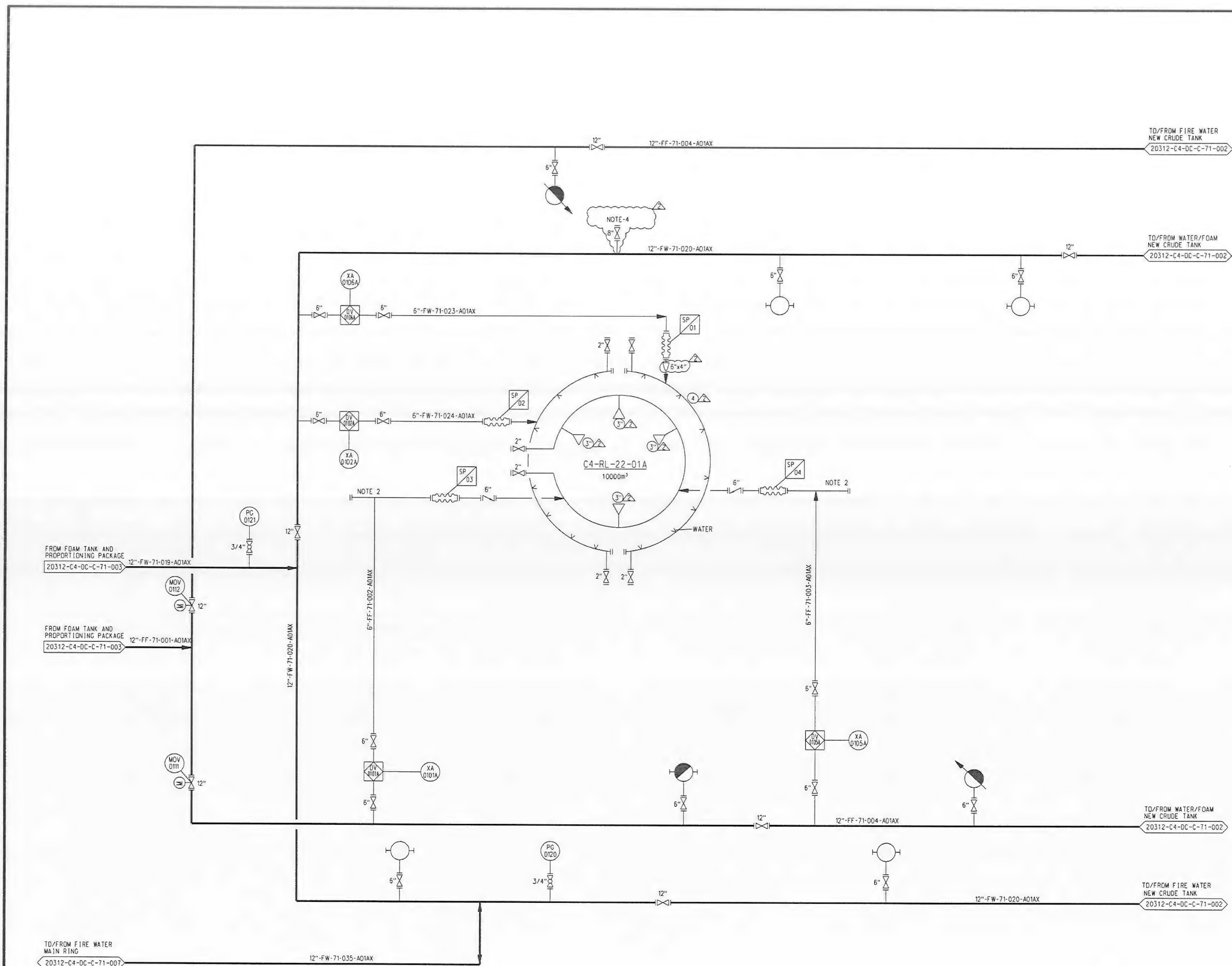
DRAWING TITLE

P & ID

FOAM TANK AND PROPORTIONING PACKAGE OIL PROCESS AND STORAGE CENTER

JOB CODE	20312		CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-028		SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-71-003	SHT 1/1	REV 2

CAD FILE NAME: C4DCC71003



NOTES

1. UNDER GROUND PIPING REQUIRED FOR ROAD CROSSING.
2. PROVIDE BLIND WITH ¾" FNPT TAP FLANGE WITH DRAIN VALVE.
3. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 71 & PID NUMBER 004.
4. TAPPING KEPT FOR FUTURE FIRE WATER NETWORK FOR TRAINING CENTER.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF
1	22 Mar'09	ISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE: P & ID
FIRE WATER/FOAM EXISTING CRUDE OIL TANK
OIL PROCESS AND STORAGE CENTER

JOB CODE: 20312 — CLASS: A

CONTRACTOR DWG No.: 20312-C4-ER21-029 — SIZE: B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-71-004	1/1	2

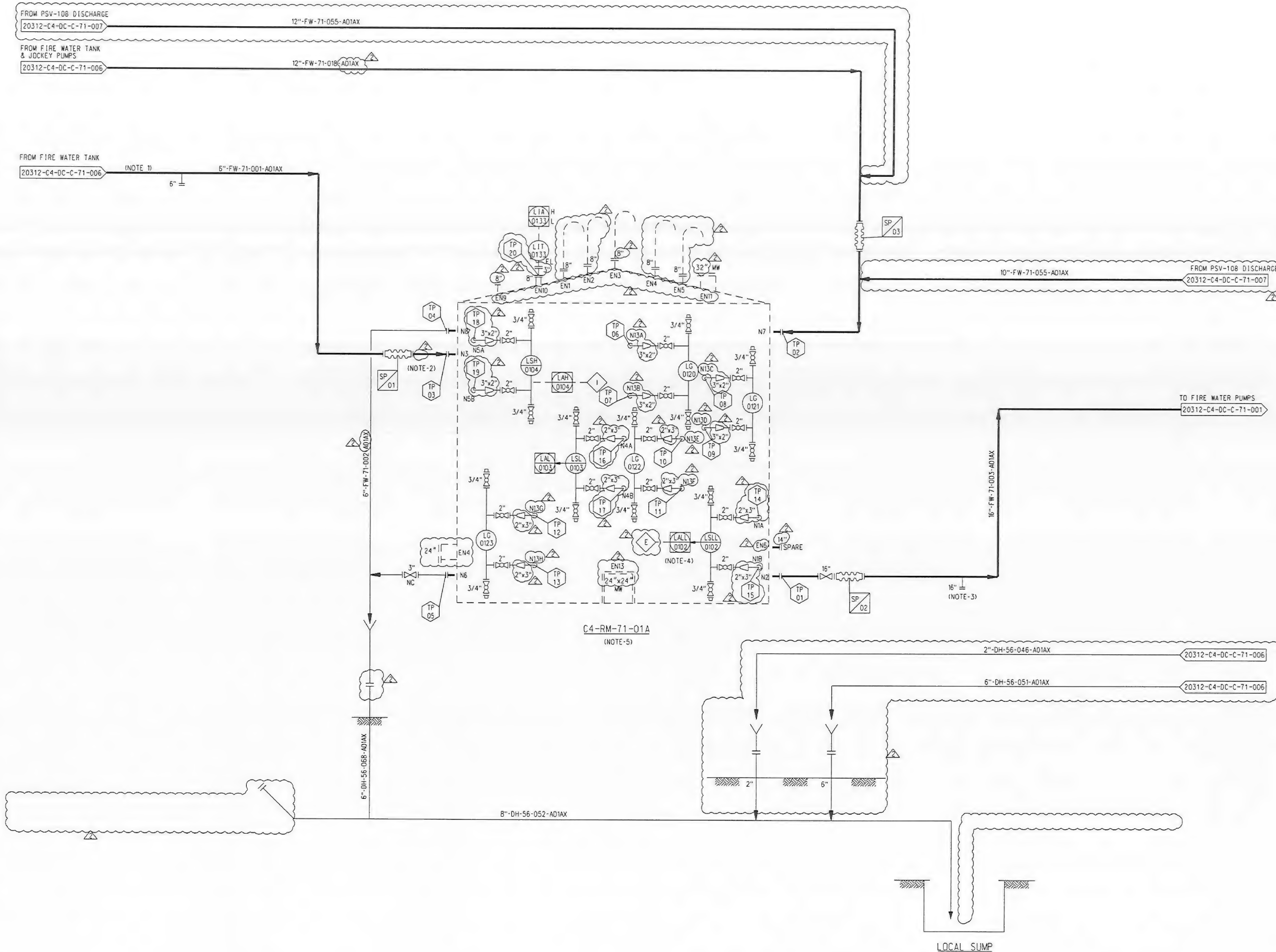
CAD FILE NAME: C4DCC71004

C4-RM-71-01A

FIRE WATER EXISTING STORAGE TANK

SIZE : 24000mm X 12500mm (T/T) (NOTE 7.8)
CAPACITY: 5000 m^3 (NOTE 7&8)
PRESSURE: ATM
TEMPERATURE : -6°C/85°C
MOC : CS INTERNALLY COATED WITH GLASS FLAKES EPOXY
TRIM : FW-C4-RM-71-01A-A01AX

LIQUID LEVEL ON C4-RM-71-01A FROM BOTTOM OF THE TANK		
0104	LAH	11800 mm
0103	LAL	11600 mm
0102	LALL	550 mm



NOTES

1. UNDER GROUND PIPING REQUIRED FOR ROAD CROSSING.
2. SOURCE WATER WELL WILL BE USED TO FILL FIREWATER TANK UNDER EMERGENCY CONDITION ONLY.
3. INSTALL BRANCH OF 16" TEE IN HORIZONTAL TO AVOID AIR POCKET.
4. LOGIC MAKE TRIP THE FIRE WATER PUMPS.
5. GSS TO CONFIRM THE CAPACITY OF THE EXISTING FIRE WATER STORAGE TANK.
6. ALL INSTRUMENT TAG NUMBERS SHALL BE PREFIXED WITH PLANT IDENTIFIER C4 & SYSTEM NUMBER 7.
7. TO BE CONFIRMED BY GSS.
8. THIS FIRE WATER TANK IS EXISTING THE SCOPE OF WORK IS REVAMPING FOR INSTRUMENTATION & INTERNAL COATING FOR CORROSION RESISTANCE.
9. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 71 & P&ID NUMBER 005.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF
1	22 Mar'09	ISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

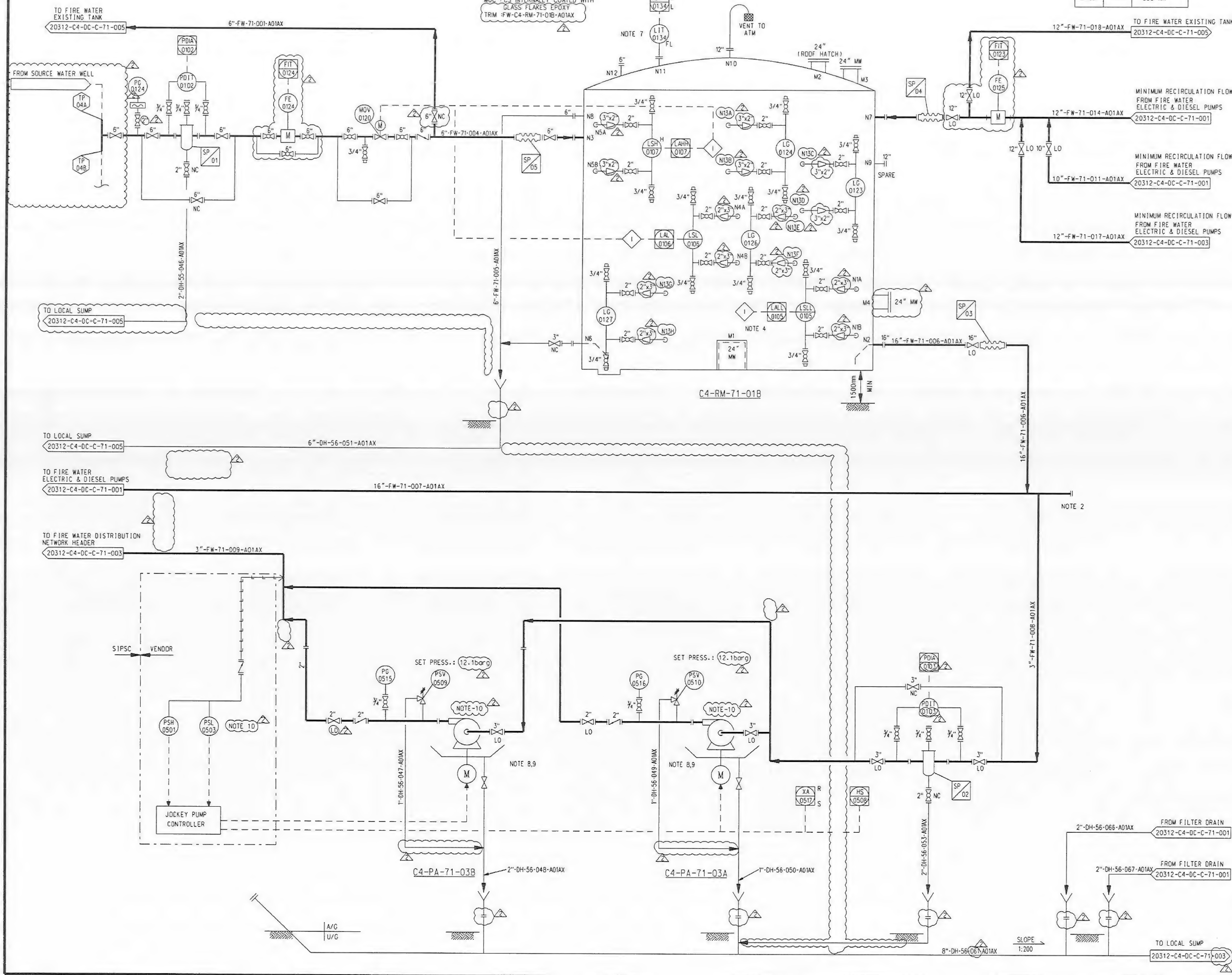
P & ID
FIRE WATER EXISTING TANK
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A

CONTRACTOR DWG No.	SIZE
20312-C4-ER21-030	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-71-005	1/1	2

CAD FILE NAME: C4DCC71005



NOTES

1. UNDER GROUND PIPING REQUIRED FOR ROAD CROSSING.
2. INSTALL BRANCH OF 16" TEE IN HORIZONTAL TO AVOID AIR POCKET.
3. SOURCE WATER WELL WILL BE USED TO FILL FIREWATER TANK UNDER EMERGENCY CONDITION ONLY.
4. TRIP FIRE WATER PUMPS.
5. ACCUMLATOR FURNISHED BY FIRE WATER JOCKEY PUMPS SKID.
6. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 71 & PID NUMBER 006.
7. LEVEL TRANSMITTER INDICATOR TO BE LOCATED AT GRADE LEVEL FOR CLEAR VISIBILITY.
8. PROVIDE EMERGENCY BACK UP POWER FOR JOCKEY PUMPS.
9. TO BE CONNECTED EMERGENCY POWER.
10. JOCKEY PUMP DISCHARGE 2" ISOLATION GATE VALVE, CHECK VALVE, PSV & HIGH & LOW PRESSURE SWITCH WITH CONTROL PANEL TO BE SUPPLIED BY JOCKEY PUMP VENDOR.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF
1	22 Mar'09	ISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

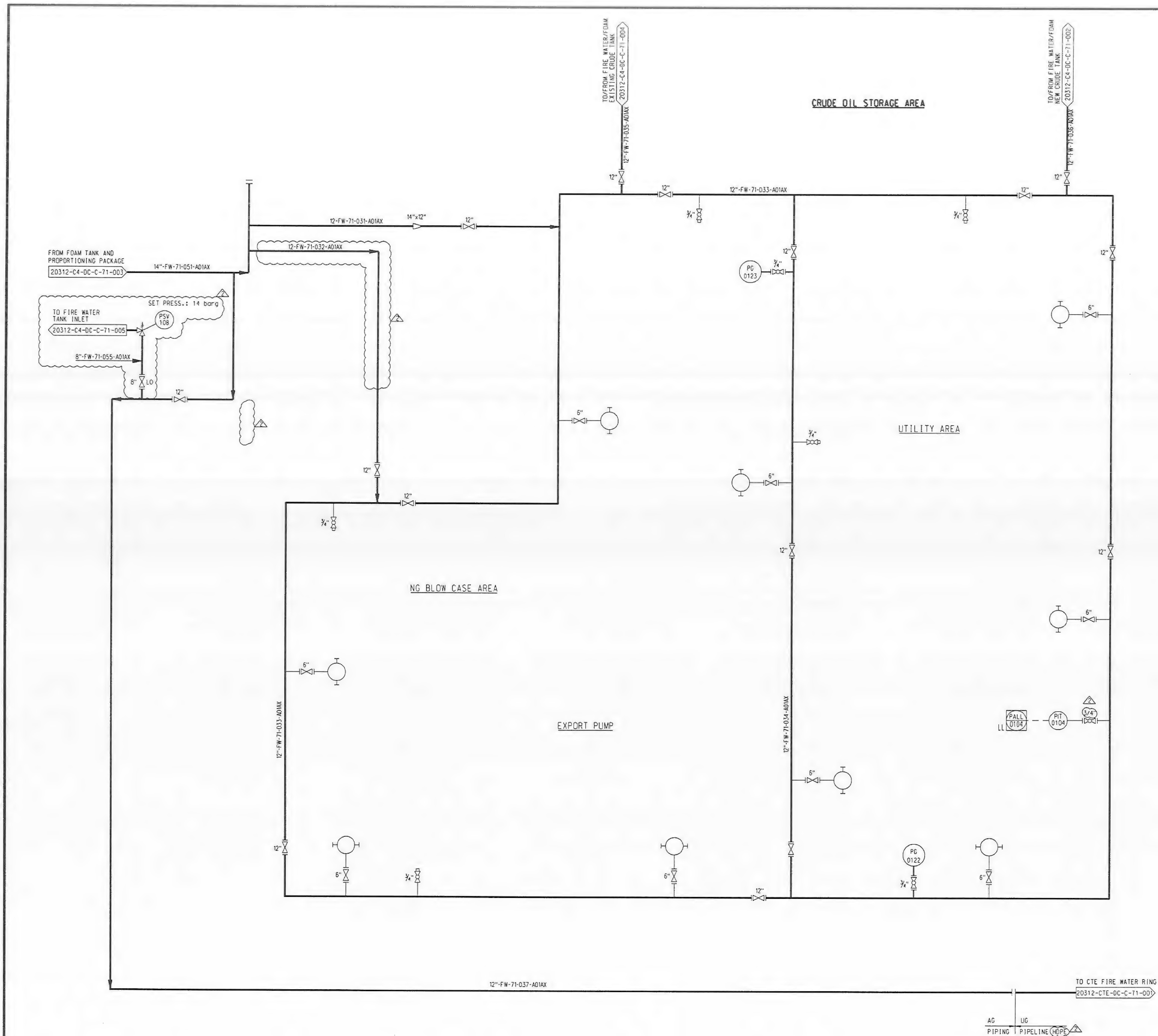
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE: P & ID
FIRE WATER TANK AND JOCKEY PUMPS
OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-031	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-71-006	1/1	2

CAD FILE NAME: C4DCC71006



NOTES

1. PSV SET PRESSURE IS 14 barg.

GENERAL NOTES:

1. FOR LEGEND P&IDS REFER
   20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER
   20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER
   20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER
   20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER
   20312-ZR-AP-A-003

HOLD LIST:

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF
1	22 Mar'09	ISSUED FOR "CONSTRUCTION"	SMD	RB	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

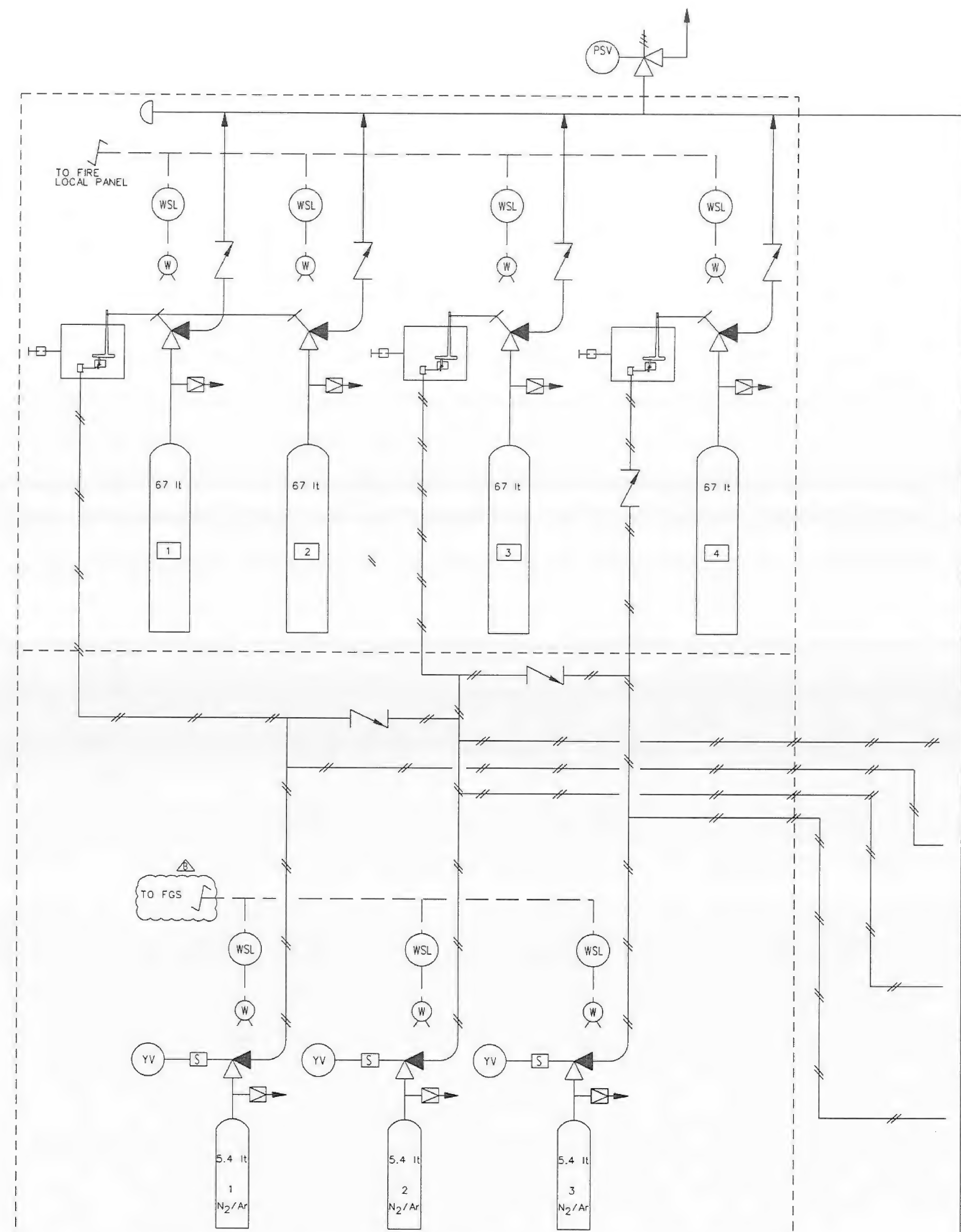
CONTRACT N°. I-013/GSS-2008

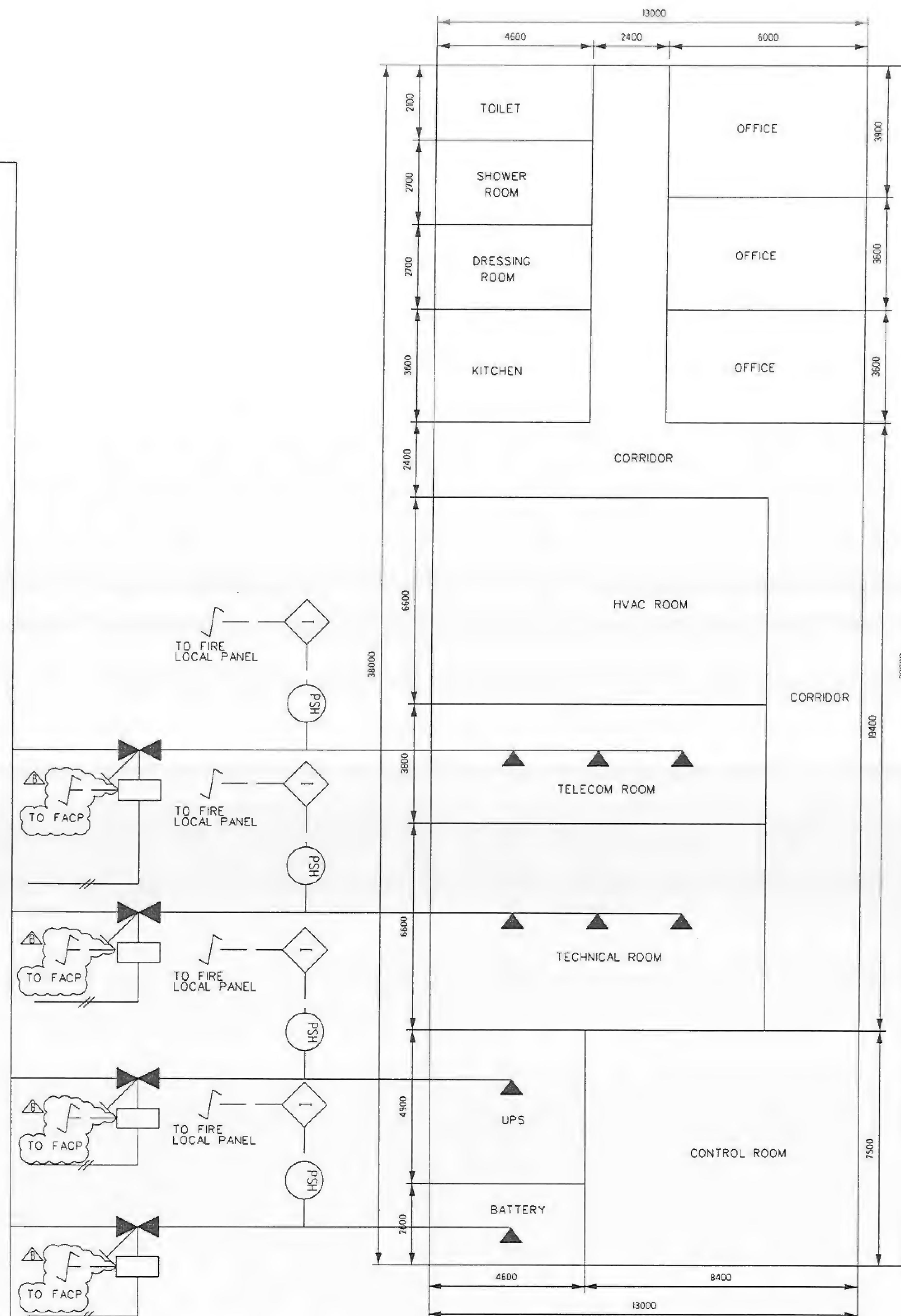
DRAWING TITLE: P & ID C4 FIRE WATER MAIN RING OIL PROCESS AND STORAGE CENTER

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-032	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-71-007	1/1	2

CAD FILE NAME: C4DCC71007

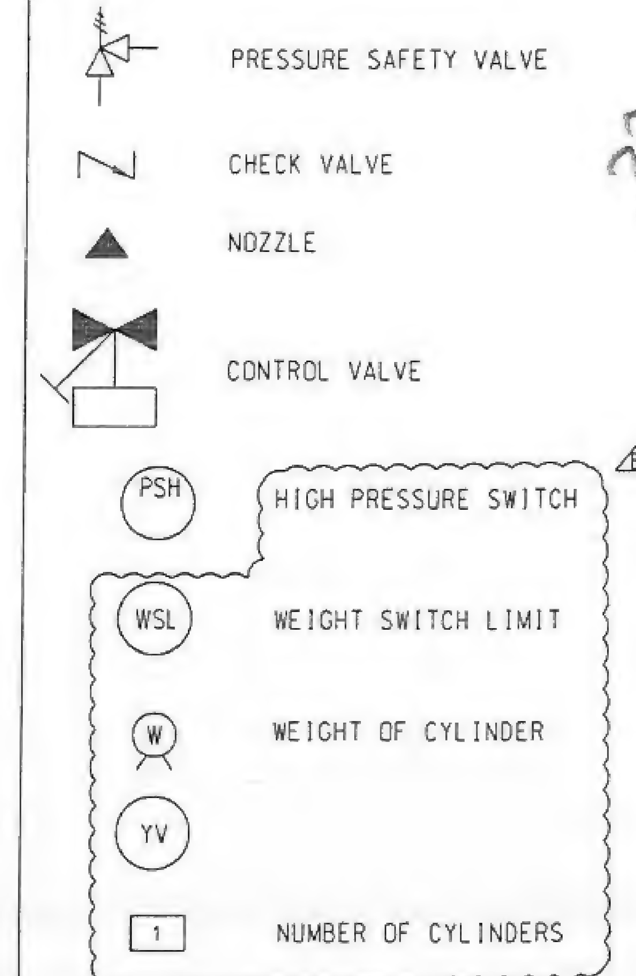




NOTES

1. SIZING OF LINE.VALVES NOZZLE SHAL BE DETERMINED BY VENDOR.
2. VENDOR SHALL PERFORM THE DETAILD CALCULATION TO CONFIRM THE RELEASE PRESSURE. AND DISCHARGE NOZZLE SIZE.
3. TOTAL NUMBER OF NOZZLES & CYLINDERS ARE INDICATIVE ONLY VENDOR SHALL CONFIRM IT BASED ON THE DETAILED CALCULATION (QUANTITY).

LEGEND:



INSTRUMENT LINE

CO_2 LINE

FGS FIRE & GAS SYSTEM

FACP FIRE ALARM CONTROL PANEL

ROOM	VOLUME cu.m	DESIGN CONCENT. AT +20°C	FLOODING FACTOR Kg/cu.m	DESIGN QTY. OF CO_2 (Kg)	CYLINDER CAPACITY (Kg)	NUMBER OF CYLINDERS	NOZZLE FLOW RATE Kg/min
TELECOM	118	34%	1.33	89	45	2	13.0
TECHNICAL	204	34%	1.33	154	45	4	13.0
UPS	68	34%	1.33	51	45	2	13.0
BATTERY	36	34%	1.33	27	45	1	13.0

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
B	17 Mar'10	ISSUED FOR "CANCELLED"	NF	RB	CB	LM	WDF
A	16 Apr'09	ISSUED FOR REVIEW/COMMENTS	NF	RB	CB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

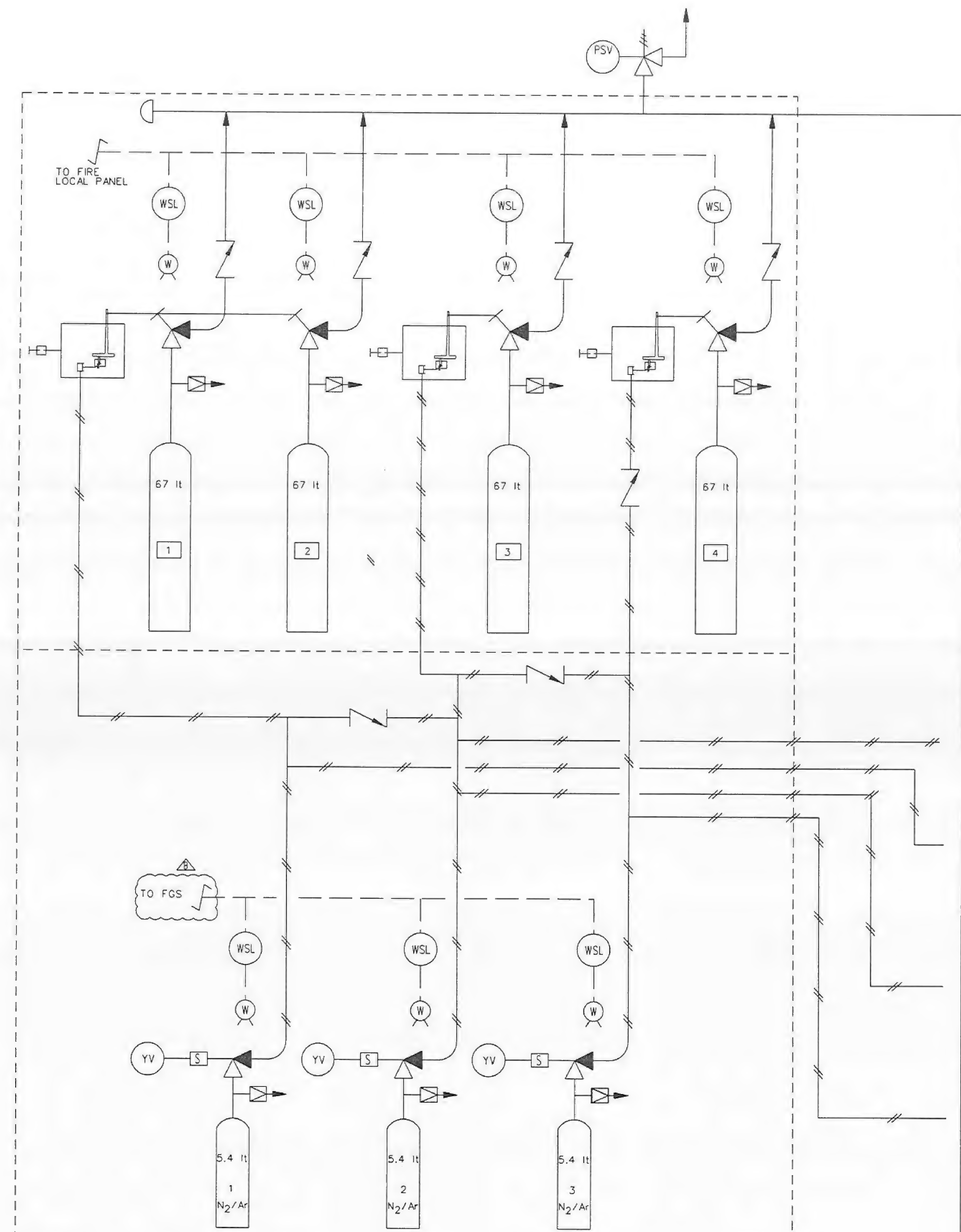
DRAWING TITLE P & ID

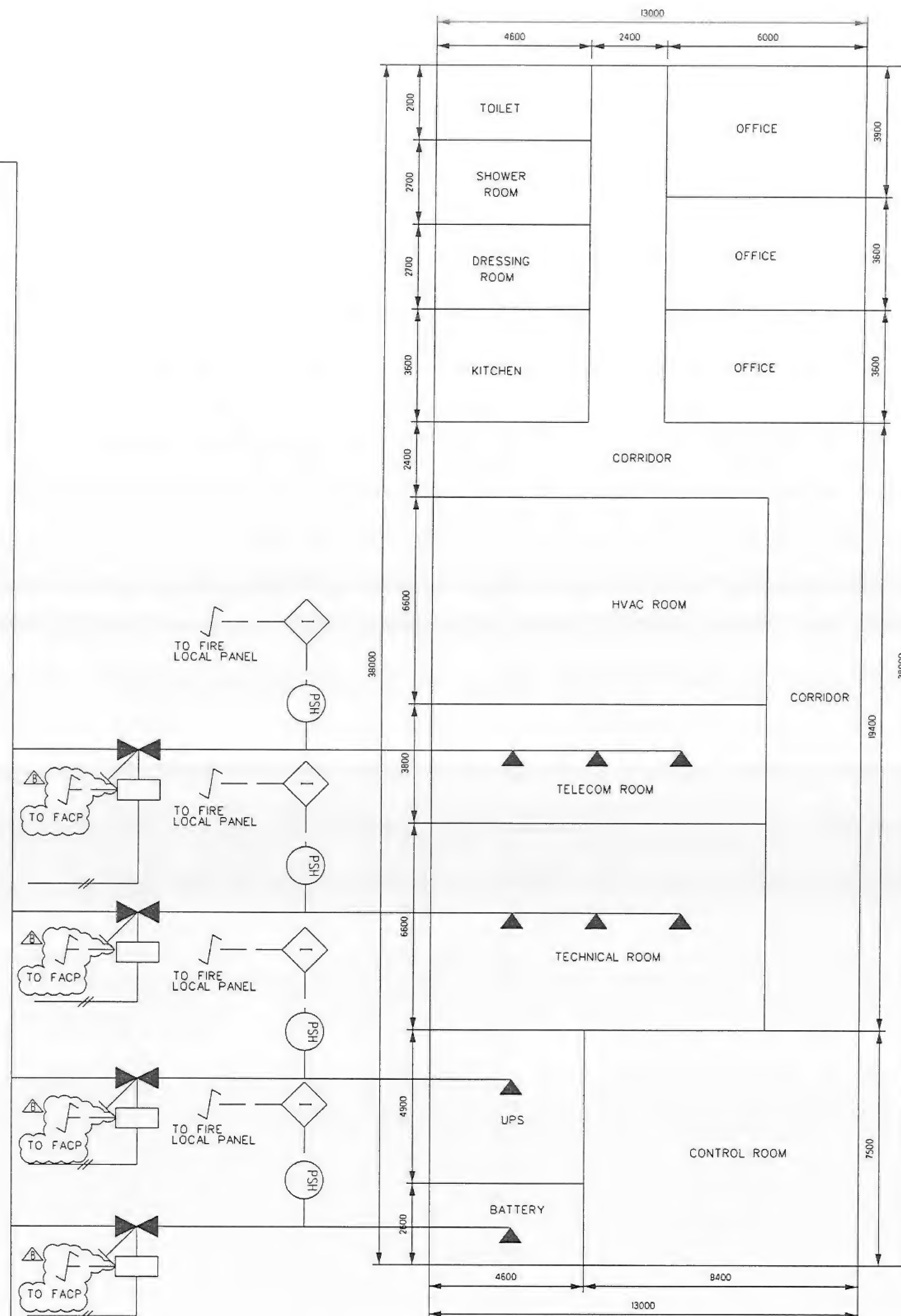
CO_2 EXTINGUISHING SYSTEM CONTROL ROOM BUILDING (C4)

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-036	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-72-001	1/1	B

CAD FILE NAME: C4DCC72001

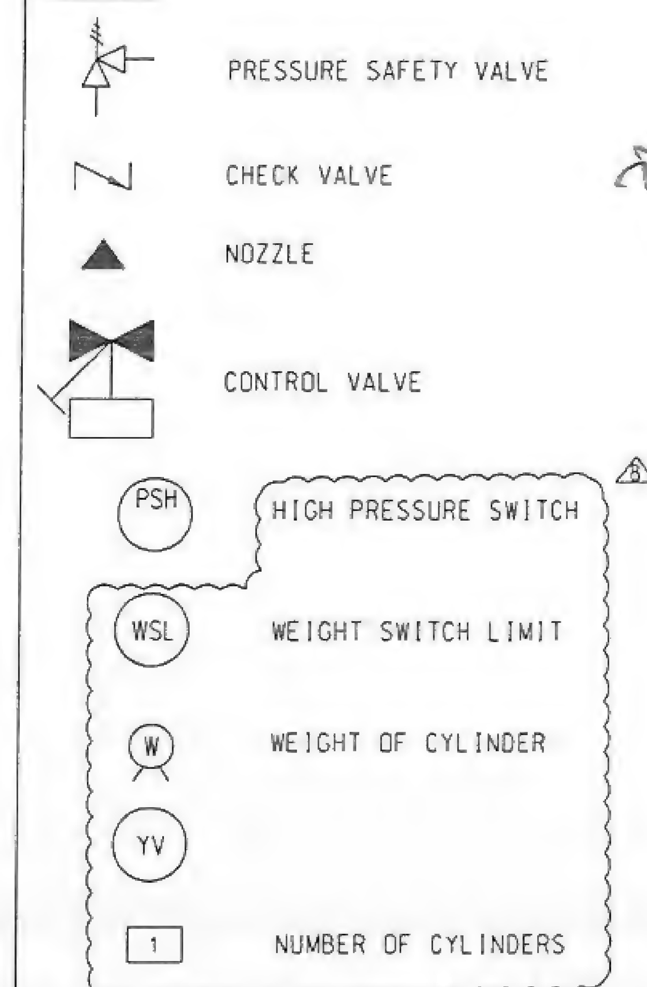


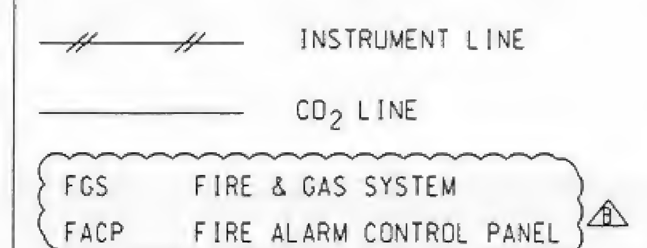


NOTES

1. SIZING OF LINE.VALVES NOZZLE SHAL BE DETERMINED BY VENDOR.
2. VENDOR SHALL PERFORM THE DETAILD CALCULATION TO CONFIRM THE RELEASE PRESSURE. AND DISCHARGE NOZZLE SIZE.
3. TOTAL NUMBER OF NOZZLES & CYLINDERS ARE INDICATIVE ONLY VENDOR SHALL CONFIRM IT BASED ON THE DETAILED CALCULATION (QUANTITY).

LEGEND:





ROOM	VOLUME cu.m	DESIGN CONCENT. AT +20° C	FLOODING FACTOR Kg/cu.m	DESIGN QTY. OF CO_2 (Kg)	CYLINDER CAPACITY (Kg)	NUMBER OF CYLINDERS	NOZZLE FLOW RATE Kg/min
TELECOM	118	34%	1.33	89	45	2	13.0
TECHNICAL	204	34%	1.33	154	45	4	13.0
UPS	68	34%	1.33	51	45	2	13.0
BATTERY	36	34%	1.33	27	45	1	13.0

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
B	17 Mar'10	ISSUED FOR "CANCELLED"	NF	RB	CB	LM	WDF
A	16 Apr'09	ISSUED FOR REVIEW/COMMENTS	NF	RB	CB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

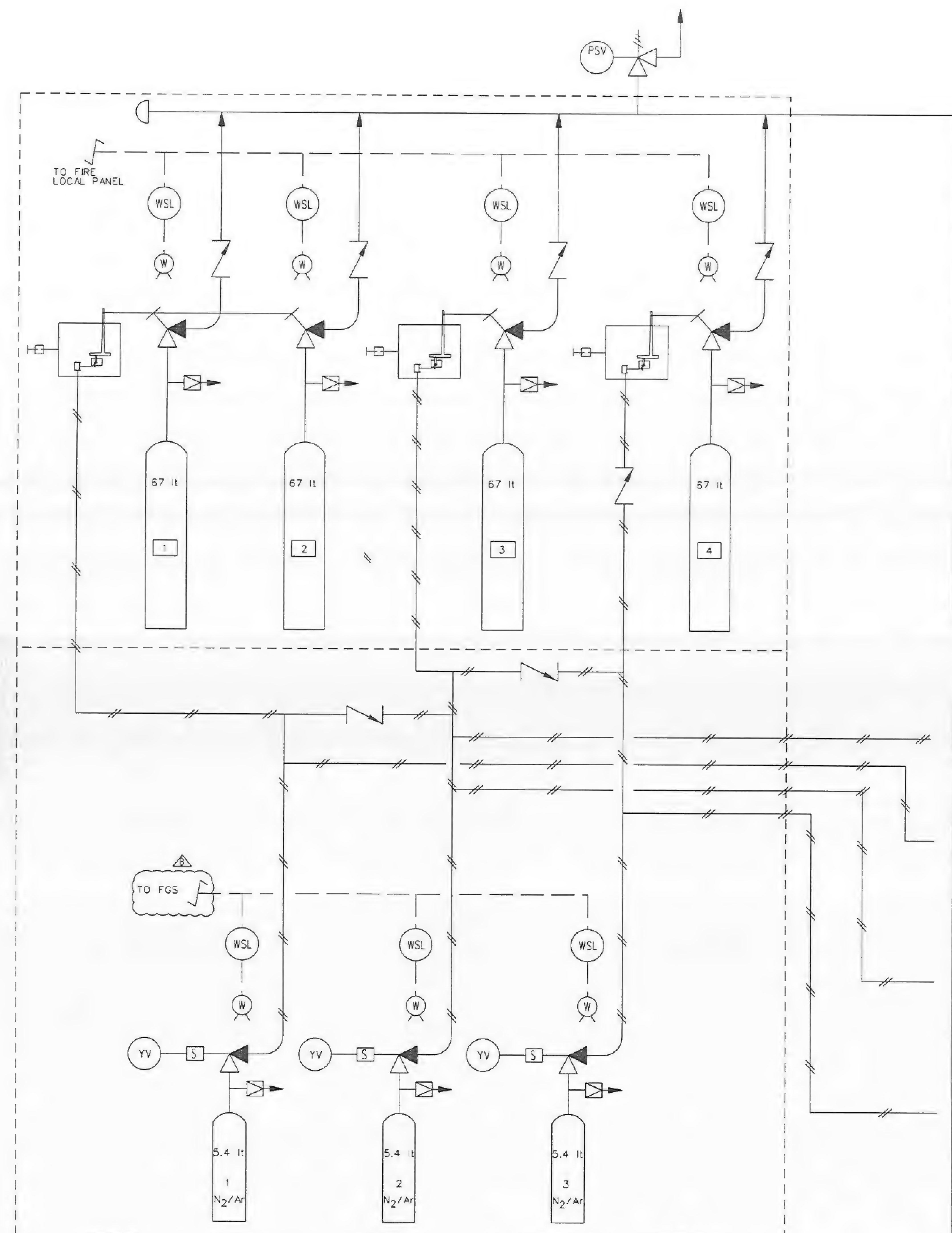
P & ID
CO_2 EXTINGUISHING SYSTEM
CONTROL ROOM BUILDING (C4)

JOB CODE 20312 | CLASS A

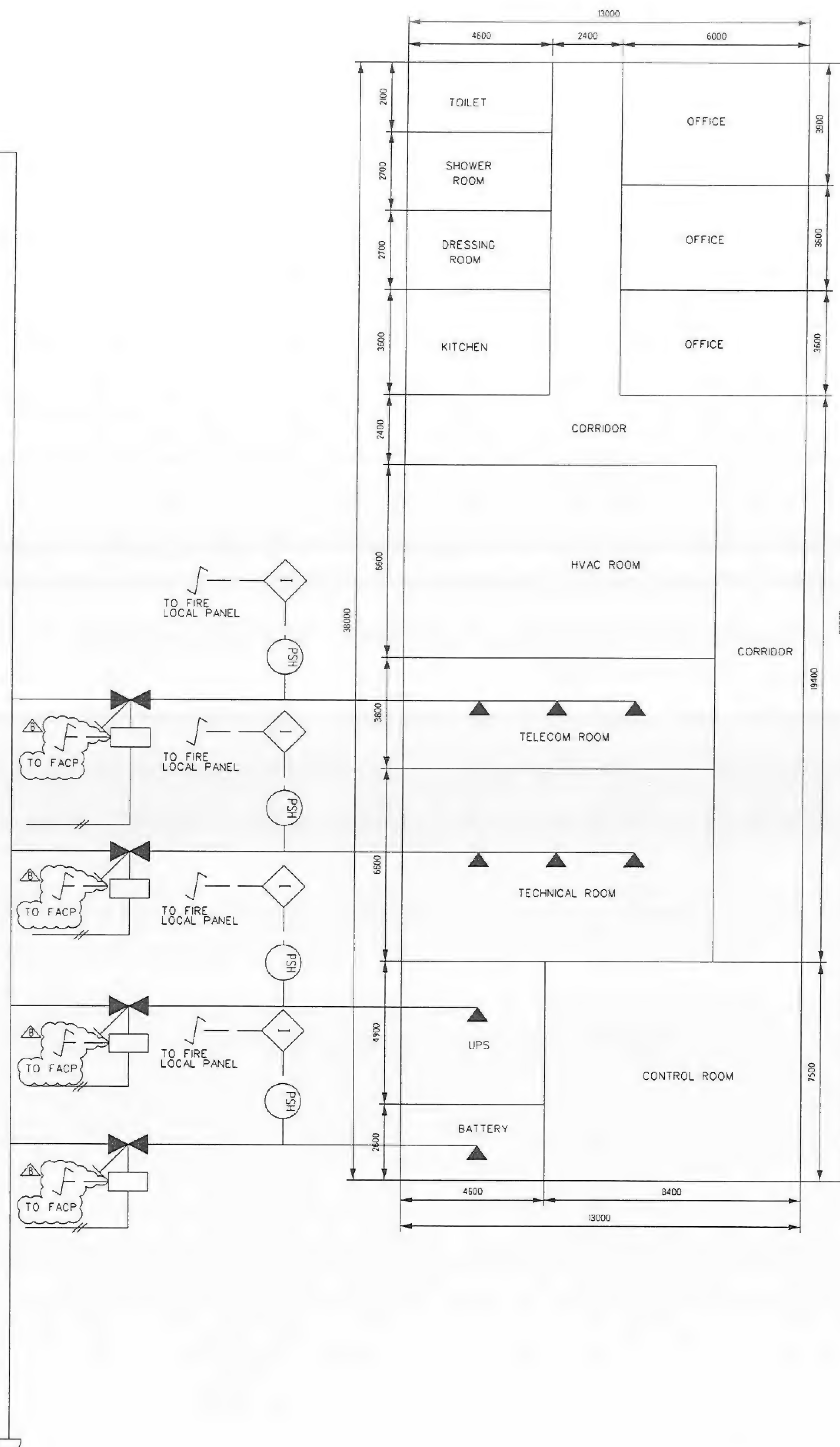
CONTRACTOR DWG No. 20312-C4-ER21-036 | SIZE B

SCALE NONE | PROJECT • 20312 | COMPANY 'S DRAWING No. 20312-C4-DC-C-72-001 | SHT 1/1 | REV B

CAD FILE NAME: C4DCC72001



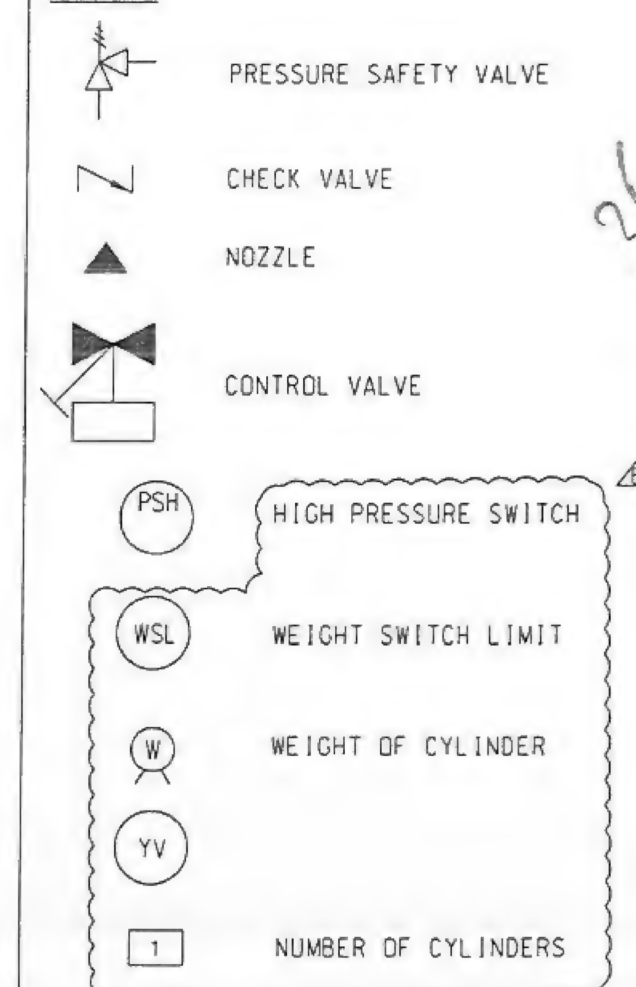
ROOM	VOLUME cu.m	DESIGN CONCENT. AT +20°C	FLOODING FACTOR Kg/cu.m	DESIGN QTY. OF CO_2 (Kg)	CYLINDER CAPACITY (Kg)	NUMBER OF CYLINDERS	NOZZLE FLOW RATE Kg/min
TELECOM	118	34%	1.33	89	45	2	13.0
TECHNICAL	204	34%	1.33	154	45	4	13.0
UPS	68	34%	1.33	51	45	2	13.0
BATTERY	36	34%	1.33	27	45	1	13.0



NOTES

1. SIZING OF LINE.VALVES NOZZLE SHAL BE DETERMINED BY VENDOR.
2. VENDOR SHALL PERFORM THE DETAILD CALCULATION TO CONFIRM THE RELEASE PRESSURE. AND DISCHARGE NOZZLE SIZE.
3. TOTAL NUMBER OF NOZZLES & CYLINDERS ARE INDICATIVE ONLY VENDOR SHALL CONFIRM IT BASED ON THE DETAILED CALCULATION (QUANTITY).

LEGEND:



INSTRUMENT LINE

CO_2 LINE

FGS FIRE & GAS SYSTEM

FACP FIRE ALARM CONTROL PANEL

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
B	17 Mar'10	ISSUED FOR "CANCELLED"	NF	RB	CB	LM	WDF
A	16 Apr'09	ISSUED FOR REVIEW/COMMENTS	NF	RB	CB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CHEMHILL

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

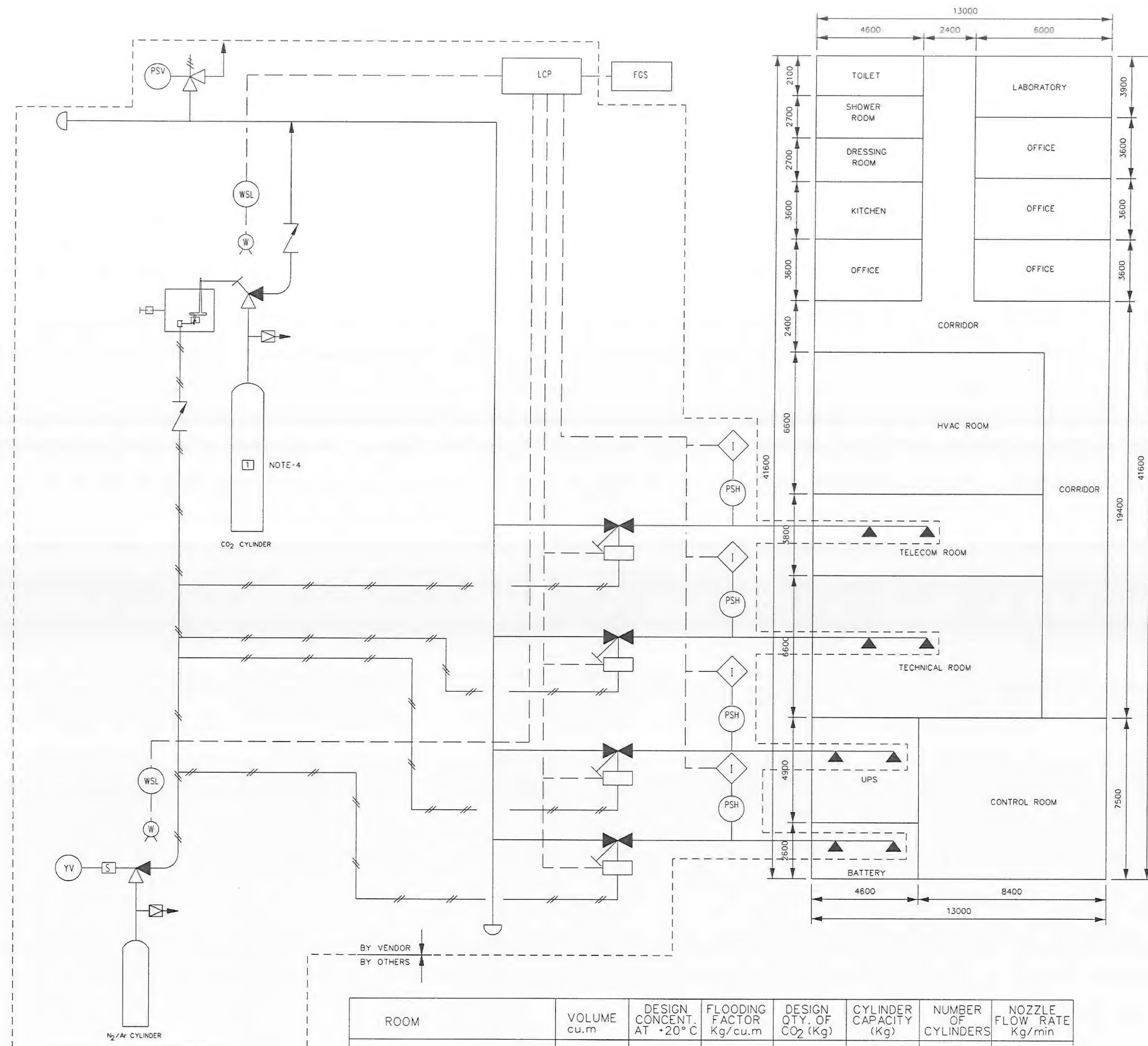
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
CO_2 EXTINGUISHING SYSTEM
CONTROL ROOM BUILDING (C4)

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-036	SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-72-001	SHT 1/1 / REV B

CAD FILE NAME: C4DCC72001



ROOM	VOLUME cu.m	DESIGN CONCENT. AT +20°C	FLOODING FACTOR Kg/cu.m	DESIGN QTY. OF CO_2 (Kg)	CYLINDER CAPACITY (Kg)	NUMBER OF CYLINDERS	NOZZLE FLOW RATE Kg/min
TELECOM (FALSE FLOOR)	32	34%	1.33	24	45	1	13.0
TECHNICAL (FALSE FLOOR)	55	34%	1.33	42	45	1	13.0
UPS (FALSE FLOOR)	18	34%	1.33	14	45	1	13.0
BATTERY	45.5	34%	1.33	34	45	1	13.0

NOTES

1. SIZING OF LINE.VALVES NOZZLE SHAL BE DETERMINED BY VENDOR.
2. VENDOR SHALL PERFORM THE DETAILD CALCULATION TO FINALIZE THE RELEASE PRESSURE. AND DISCHARGE NOZZLE SIZE.
3. TOTAL NUMBER OF CO_2 CYLINDERS AND AMOUNT OF CO_2 SHALL BE FINALIZED BY VENDOR.
4. TOTAL NUMBER OF NOZZLES & CYLINDERS ARE INDICATIVE ONLY VENDOR SHALL FINALIZE IT BASED ON THE DETAILED CALCULATION (QUANTITY).
5. ACTIVATION OF CO_2 EXTINGUISHING SYSTEM SHALL BE DONE IN LCP TO BE SUPPLIED BY VENDOR.
6. BATTERY ROOM SHALL BE PROVIDED WITH H_2 GAS DETECTORS.
7. MAIN AND RESERVE N_2 CYLINDERS SHALL BE MOUNTED AT SITE BY VENDOR.
8. MAIN AND RESERVE CO_2 CYLINDERS SHALL BE MOUNTED AT SITE BY VENDOR.
9. CO_2 AND CYLINDER CHARACTERISTICS :
   VOLUME : 67 LIT.
   MASS OF CO_2 : 45 KG.
   WEIGHT OF CYLINDER (CO_2 & N_2) : ABOVE 77 KG.

36

LEGEND:

- PRESSURE SAFETY VALVE
- CHECK VALVE
- NOZZLE
- CONTROL VALVE (SOLENOID)
- LCP — LOCAL CONTROL PANNEL
- FGS — FIRE AND GAS SYSTEM
- PSH — HIGH PRESSURE SWITCH
- WSL — WEIGHT SWITCH LIMIT
- W — WEIGHT OF CYLINDER
- XX — NUMBER OF CYLINDERS
- INSTRUMENT LINE
- CO_2 LINE
- LCP LINE

REFERENCE DRAWINGS

CONTROL ROOM - PLAN	20312-C4-EC-33-006

REVISIONS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	NF	RB	SB	LM	WDF
1	30 Aug'09	ISSUED FOR "CONSTRUCTION"	NF	RB	SB	LM	WDF

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CHEMHILL

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

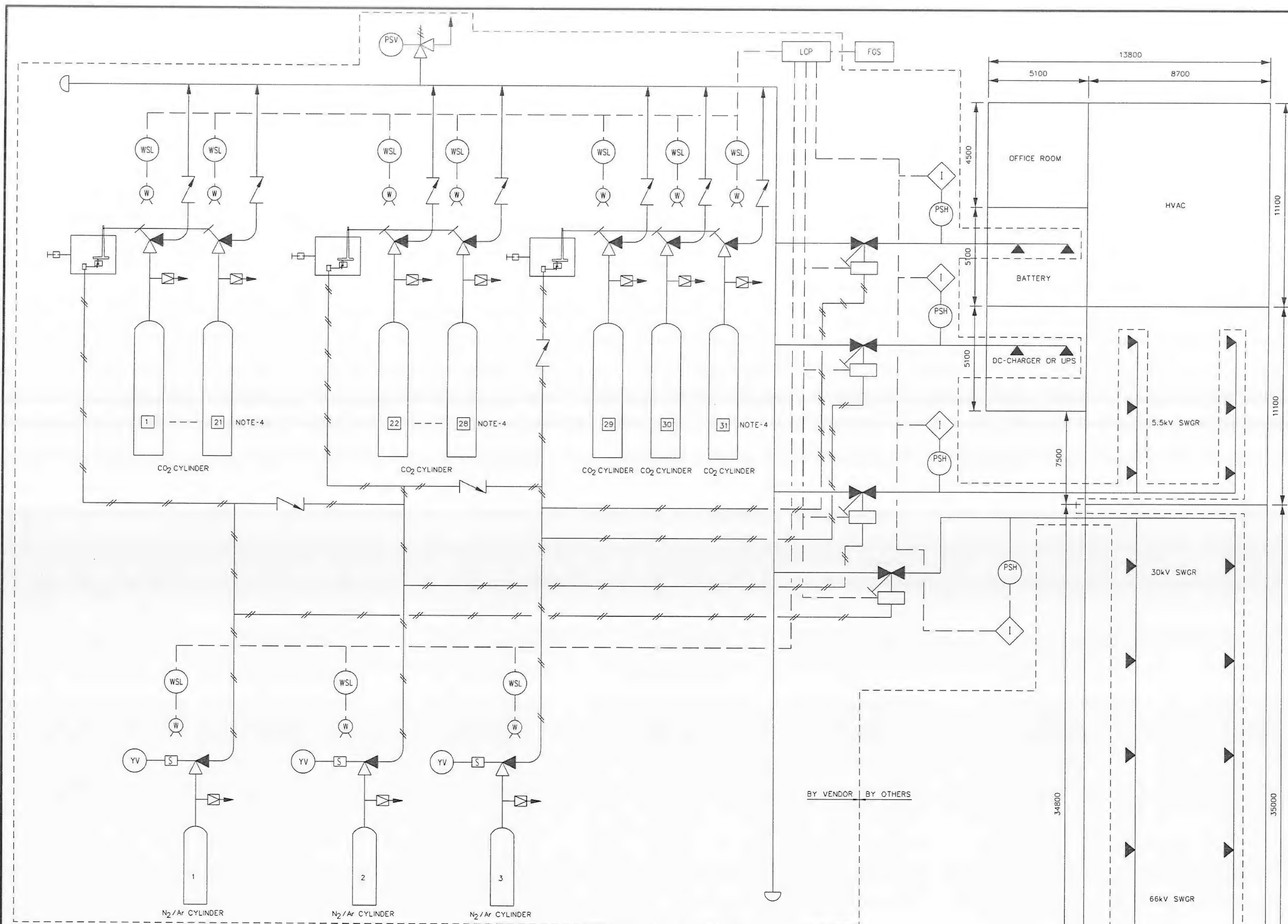
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
CO_2 EXTINGUISHING SYSTEM
CONTROL ROOM BUILDING

JOB CODE	20312			CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-037			SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-72-002		SHT 1/1	REV 2

CAD FILE NAME: C4DCC72002



ROOM	VOLUME cu.m	DESIGN CONCENT. AT +20° C	FLOODING FACTOR Kg/cu.m	DESIGN QTY. CO_2 Kg	CYLINDER CAPACITY (CO_2)	NUMBER OF CYLINDERS	NOZZLE FLOW RATE Kg/min
UPS	130	34%	1.33	98	45	3	13.0
5.5kV SWGR	160	34%	1.33	121	45	6	13.0
30kV/60kV SWGR	4741	34%	1.33	361	45	12	13.0
BATTERY	130	34%	1.33	98	45	3	13.0

NOTES

1. SIZING OF LINE.VALVES NOZZLE SHAL BE DETERMINED BY VENDOR.
2. VENDOR SHALL PERFORM THE DETAILD CALCULATION TO FINALIZE THE RELEASE PRESSURE. AND DISCHARGE NOZZLE SIZE.
3. TOTAL NUMBER OF CO_2 CYLINDERS AND AMOUNT OF CO_2 SHALL BE FINALIZED BY VENDOR.
4. TOTAL NUMBER OF NOZZLES & CYLINDERS ARE INDICATIVE ONLY VENDOR SHALL FINALIZE IT BASED ON THE DETAILED CALCULATION (QUANTITY).
5. ACTIVATION OF CO_2 EXTINGUISHING SYSTEM SHALL BE DONE IN LCP TO BE SUPPLIED BY VENDOR.
6. BATTERY ROOM SHALL BE PROVIDED WITH H_2 GAS DETECTORS.
7. MAIN AND RESERVE N_2 CYLINDERS SHALL BE MOUNTED AT SITE BY VENDOR.
8. MAIN AND RESERVE CO_2 CYLINDERS SHALL BE MOUNTED AT SITE BY VENDOR.
9. CO_2 AND CYLINDER CHARACTERISTICS :
   VOLUME : 67 LIT.
   MASS OF CO_2 : 45 KG.
   WEIGHT OF CYLINDER (CO_2 & N_2) : ABOVE 77 KG.

37

LEGEND:

- PRESSURE SAFETY VALVE
- CHECK VALVE
- NOZZLE
- CONTROL VALVE (SOLENOID)
- LCP — LOCAL CONTROL PANNEL
- FGS — FIRE AND GAS SYSTEM
- PSH — HIGH PRESSURE SWITCH
- WSL — WEIGHT SWITCH LIMIT
- W — WEIGHT OF CYLINDER
- XX — NUMBER OF CYLINDERS
- INSTRUMENT LINE
- CO_2 LINE
- LCP LINE

REFERENCE DRAWINGS	
60KV H.V. SUBSTATION PLAN	20312-C4-EC-33-011

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	NF	RB	SB	LM	WDF
1	30 Aug'09	ISSUED FOR "CONSTRUCTION"	NF	RB	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

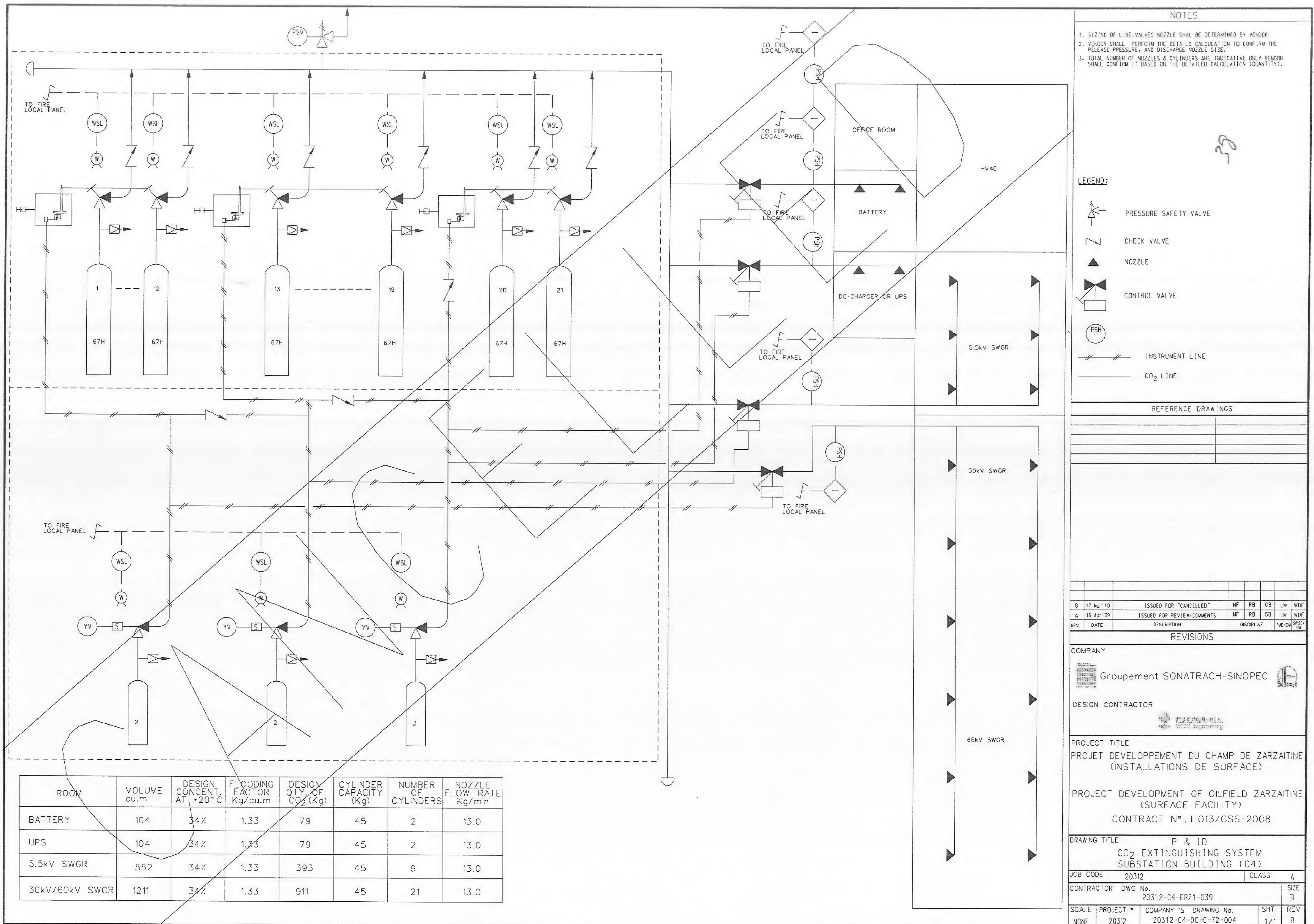
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
CO_2 EXTINGUISHING SYSTEM
SUBSTATION BUILDING

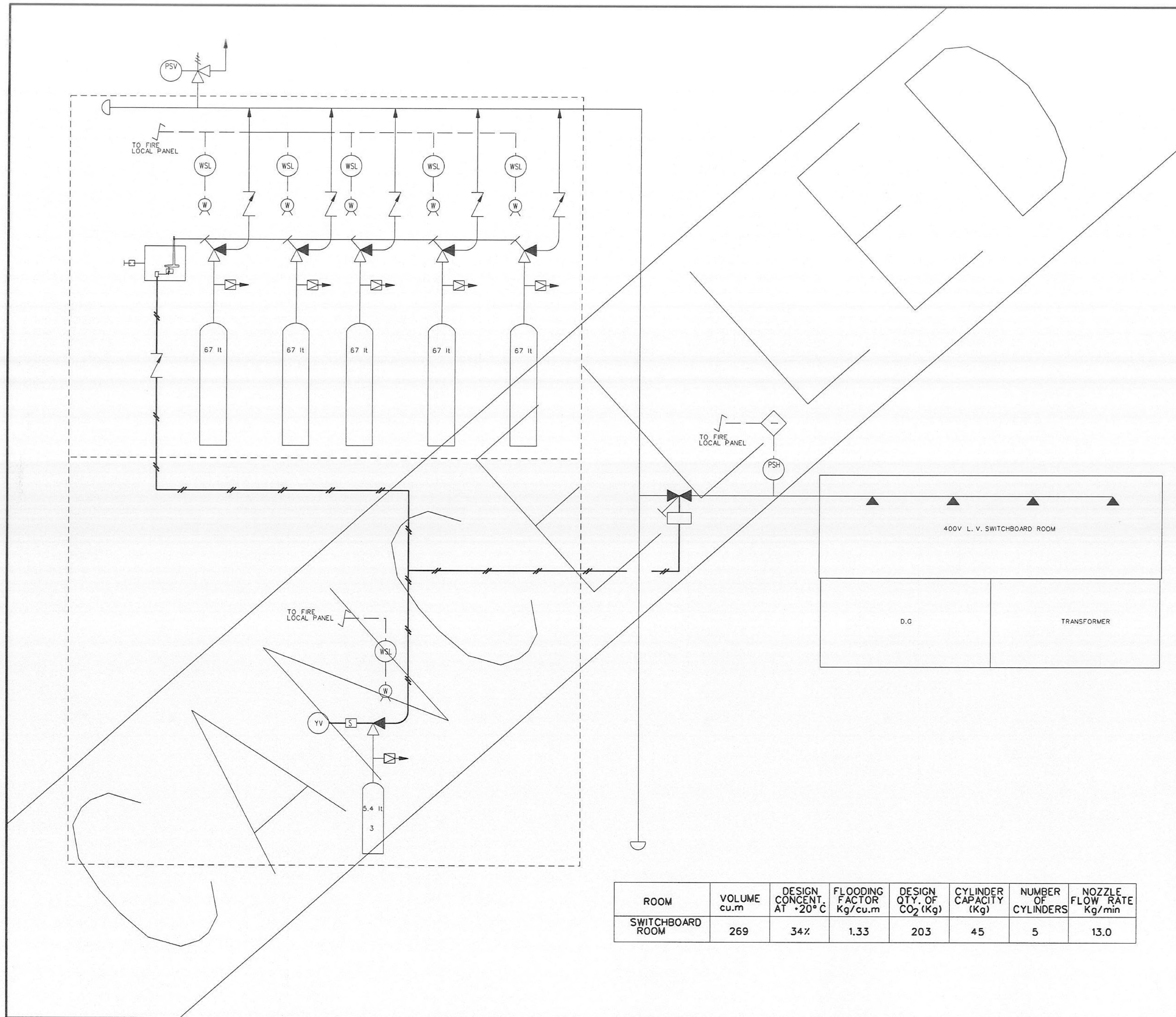
JOB CODE	20312			CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-040			SIZE	B
SCALE NONE	PROJECT # 20312	COMPANY 'S DRAWING No. 20312-C4-DC-C-72-003		SHT 1/1	REV 2

CAD FILE NAME: C4DCC72004



ROOM	VOLUME cu.m	DESIGN CONCENT. AT +20°C	FLOODING FACTOR Kg/cu.m	DESIGN QTY. OF CO_2 (Kg)	CYLINDER CAPACITY (Kg)	NUMBER OF CYLINDERS	NOZZLE FLOW RATE Kg/min
BATTERY	104	34%	1.33	79	45	2	13.0
UPS	104	34%	1.33	79	45	2	13.0
5.5kV SWGR	552	34%	1.33	393	45	9	13.0
30kV/60kV SWGR	1211	34%	1.33	911	45	21	13.0

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
B	17 Mar'10	ISSUED FOR "CANCELLED"	NF	RB	CB	LM	WDF
A	16 Apr'09	ISSUED FOR REVIEW/COMMENTS	NF	RB	SB	LM	WDF



ROOM	VOLUME cu.m	DESIGN CONCENT. AT +20°C	FLOODING FACTOR Kg/cu.m	DESIGN QTY. OF CO_2 (Kg)	CYLINDER CAPACITY (Kg)	NUMBER OF CYLINDERS	NOZZLE FLOW RATE Kg/min
SWITCHBOARD ROOM	269	34%	1.33	203	45	5	13.0

NOTES

1. SIZING OF LINE,VALVES NOZZLE SHAL BE DETERMINED BY VENDOR.
2. VENDOR SHALL PERFORM THE DETAILD CALCULATION TO CONFIRM THE RELEASE PRESSURE, AND DISCHARGE NOZZLE SIZE.
3. TOTAL NUMBER OF NOZZLES & CYLINDERS ARE INDICATIVE ONLY VENDOR SHALL CONFIRM IT BASED ON THE DETAILED CALCULATION (QUANTITY).

39

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
B	17 Mar'10	ISSUED FOR "CANCELLED"	NF	RB	CB	LM	WDF
A	16 Apr'09	ISSUED FOR REVIEW/COMMENTS	NF	RB	CB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL VECO Engineering

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE: P & ID

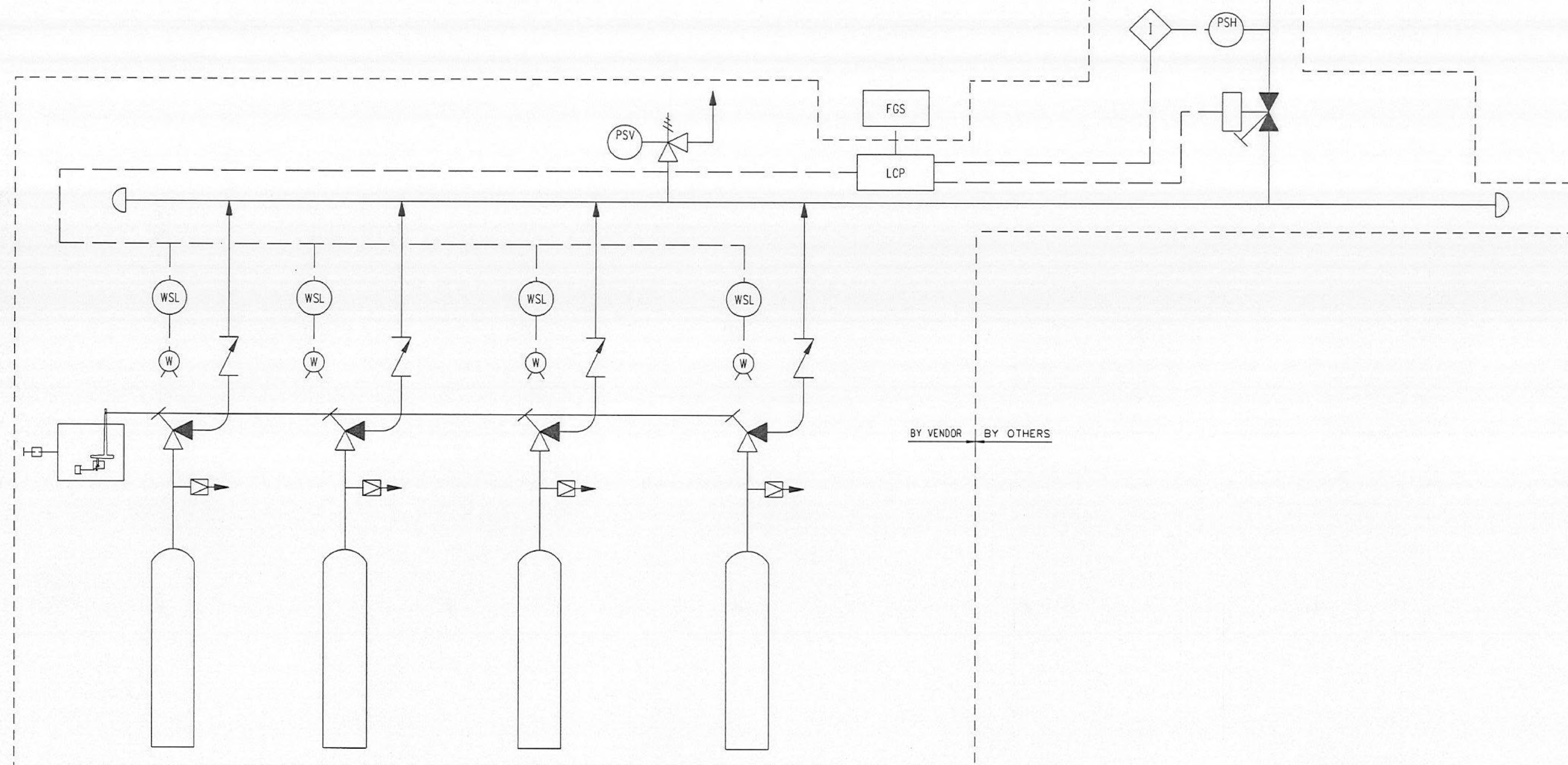
400V L. V. SWITCHBOARD ROOM C4

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-041	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-72-005	01	B

CAD FILE NAME: C4DCC72005





NOTES

1. TOTAL NUMBER OF DISCHARGE NOZZLES AND DISCHARGE PRESSURE SHALL BE FINALIZED BY THE VENDOR BASED ON THE DETAILED CALCULATION.
2. SIZE OF LINE. VALVES AND DISCHARGE NOZZLES SHALL BE FINALIZED BY VENDOR.
3. TOTAL AMOUNT OF FM200 AND NUMBER OF CYLINDERS SHALL BE FINALISED BY VENDOR.
4. THE NUMBER OF NOZZLES AND CYLINDERS ARE INDICATIVE ONLY VENDOR SHALL FINALIZE.
5. ACTIVATION OF FM200 EXTINGUISHING SYSTEM SHALL BE DONE IN LCP TO BE SUPPLIED BY VENDOR.
6. MAIN AND STANDBY FM200 CYLINDERS SHALL BE MOUNTED AT SITE BY VENDOR.
7. WEIGHT OF FM200 CYLINDERS SHALL BE CONFIRMED BY THE VENDOR.

LEGEND:

40

- PRESSURE SAFETY VALVE
- CHECK VALVE
- NOZZLE
- CONTROL VALVE (SOLENOID)
- LCP — LOCAL CONTROL PANNEL
- FGS — FIRE AND GAS SYSTEM
- PSH — HIGH PRESSURE SWITCH
- WSL — WEIGHT SWITCH LIMIT
- W — WEIGHT OF CYLINDER
- FM200 LINE
- LCP LINE

REFERENCE DRAWINGS

CONTROL ROOM - PLAN	20312-C4-EC33-006

REVISIONS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
2	17 Mar'10	REISSUED FOR "CONSTRUCTION"	NF	RB	SB	LM	WDF
1	30 Aug'09	ISSUED FOR "CONSTRUCTION"	NF	RB	SB	LM	WDF

COMPANY
Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR
CH2MHILL VECO Engineering

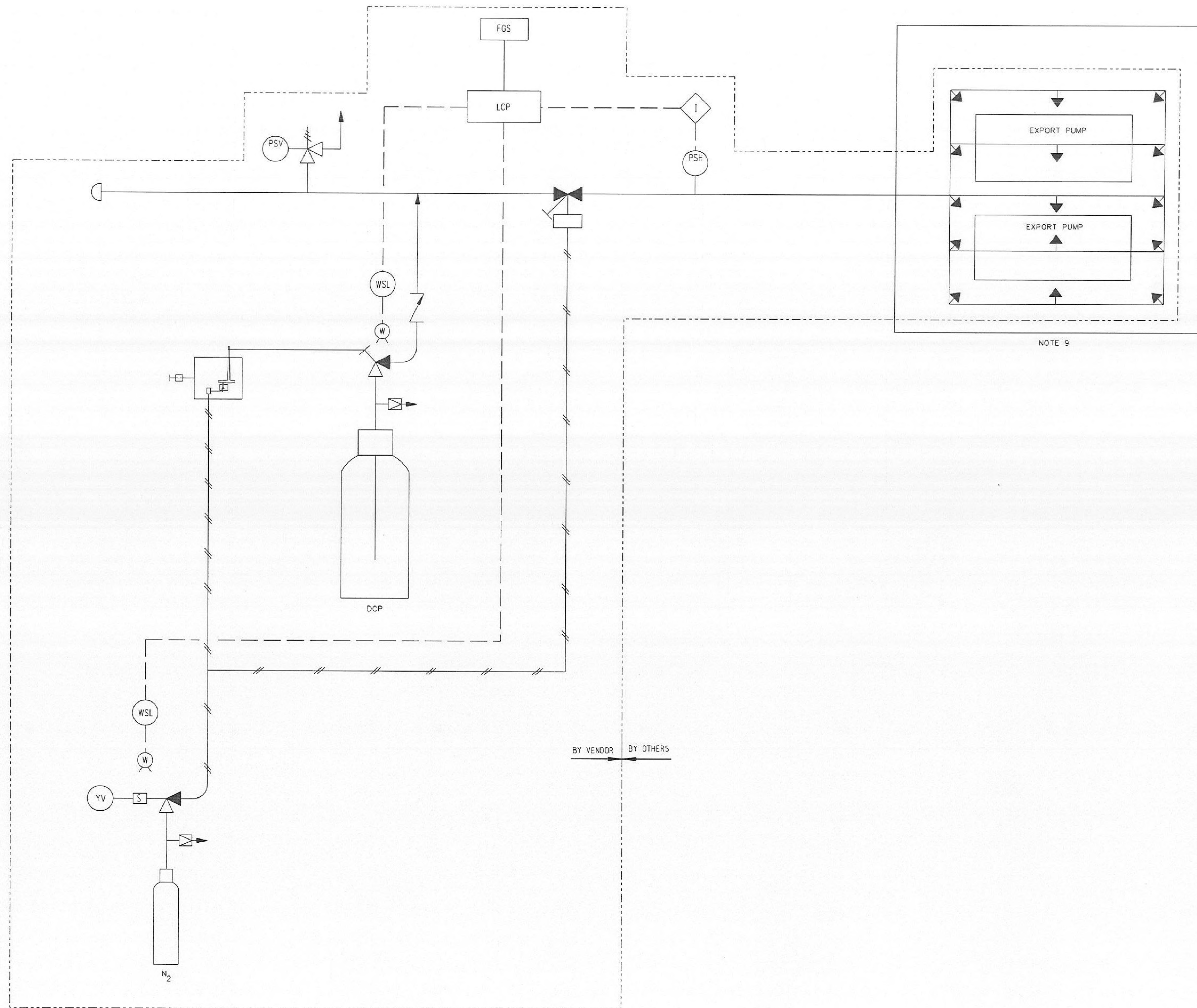
PROJECT TITLE
PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)
CONTRACT N°. I-013/GSS-2008

DRAWING TITLE
P & ID
FM200 EXTINGUISHING SYSTEM
CONTROL ROOM BUILDING (C4)

JOB CODE	20312			CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-042			SIZE	B
SCALE NONE	PROJECT • 20312	COMPANY 'S DRAWING No.	20312-C4-DC-C-72-006	SHT 1/1	REV 2

CAD FILE NAME: C4DCC72006



NOTES

1. SPRAY HEAD HEIGHT FROM DECK PLATE IS MAX. 3M (VENDOR TO CONFORM).
2. SPRAY HEAD SPACING MAX. 2.5M (VENDOR TO CONFORM).
3. SPRAY HEAD NOZZLES MAX. DIST. FROM THE WALL 2.5M (VENDOR TO CONFORM).
4. VENDOR SHALL PERFORM DETAILED CALCULATION TO CONFIRM THE SIZE, DISCHARGE & NUMBER OF NOZZLES.
5. CAPACITY OF THE DCP CYLINDER SHALL BE CONFIRMED BY THE VENDER.(BASED ON THE DETAILED CALCULATION.)
6. AMOUNT OF DCP REQUIRED SHALL BE CONFRMED BY VENDOR. (BASED ON THE DETAILED CALCULATION.)
7. MAX. WORKING PRESSURE SHALL BE CONFIRMED BY THE VENDOR.
8. PIPE SIZING TO BE DETERMINED BY THE VENDOR.
9. EXPORT PUMP SHELTER.
10. DCP-DRY CHEMICAL POWDER.
10. ACTIVATION FIRE SUPPRESSION SYSTEM SHALL BE SUPPLIED BY VENDOR.

LEGEND

- CHECK VALVE
- DISCHARGE NOZZLE
- CONTROL VALVE
- HIGH PRESSURE SWITCH
- WEIGHT SWITCH LIMIT
- WEIGHT OF CYLINDER
- LCP — LOCAL CONTROL PANNEL
- FGS — FIRE AND GAS SYSTEM
- CO_2 LINE
- LCP LINE

REFERENCE DRAWINGS

REVISIONS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SPSC/PM
A	17 Mar'10	ISSUED FOR REVIEW	NF	RB	SB	LM	WDF

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE FIRE SUPPRESSION SYSTEM FOR CRUDE OIL EXPORT PUMP C4

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER-21-043	SIZE	B

SCALE	PROJECT *	COMPANY 'S DRAWING No.	SHT	REV
1:100	20312	20312-C4-DC-C-72-007	01	A

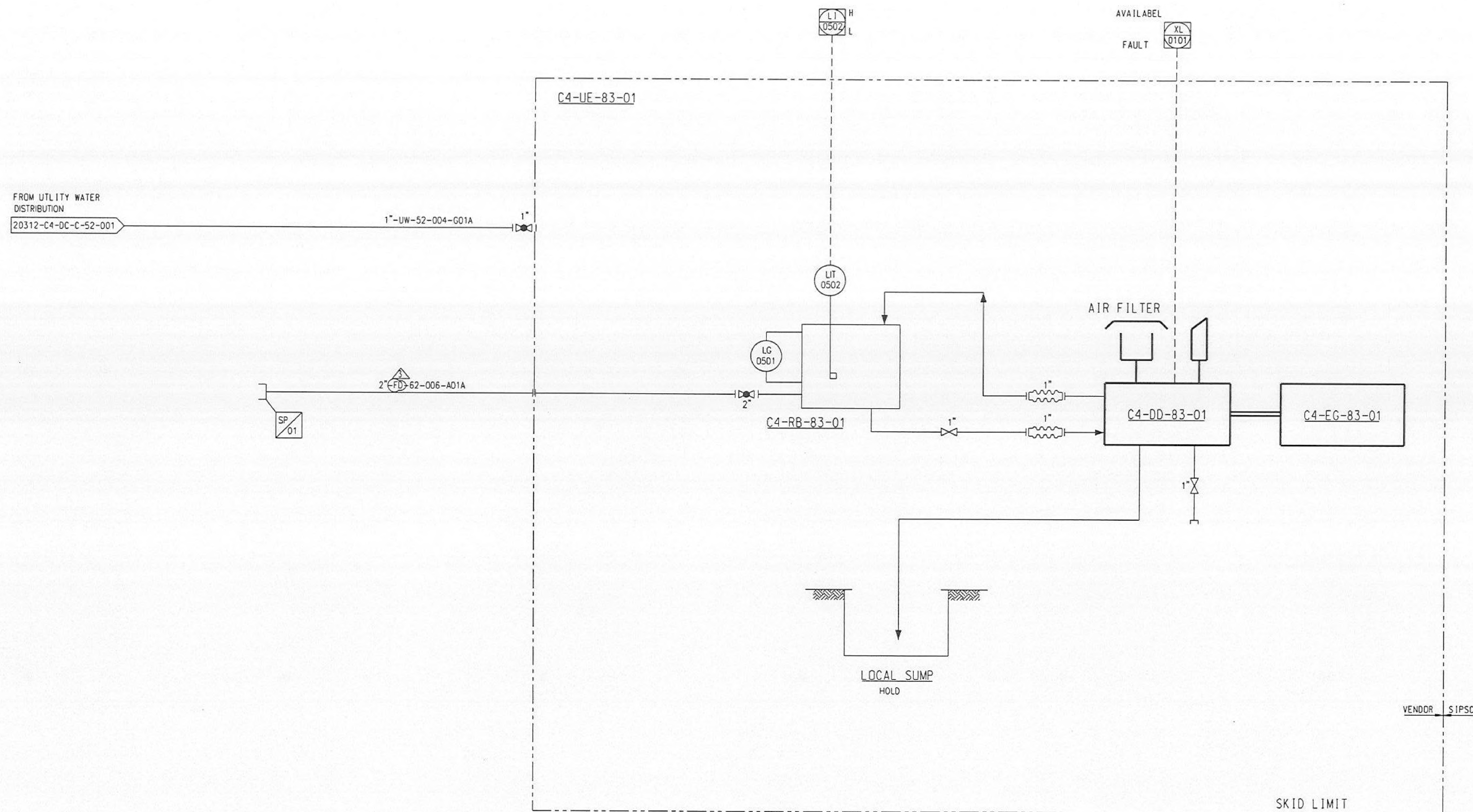
CAD FILE NAME: 20312C4DCC72007

C4-UE-83-01
EMERGENCY GENERATORS SKID

C4-RB-83-01
EMERGENCY DIESEL DAY TANK
CAPACITY : 904 LIT

C4-DD-83-01
DIESEL ENGINE
DUTY : 400 Kw

C4-EG-83-01
GENERATOR
400V 3 PHASE 50HZ



NOTES

1-2. DELETED.

3. ALL SPECIALITY ITEM TAG NUMBERS ARE PREFIXED WITH AREA CODE C4, SYSTEM NUMBER 83 & P&ID NUMBER 001

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GENERAL NOTES:

1. FOR LEGEND P&IDS REFER 20312-ZR-DC-C-00-001/01~03
2. FOR DESIGN BASIS REFER 20312-ZR-TB-C-22-001
3. FOR PIPING & MATERIAL SPECIFICATION REFER 20312-ZR-SP-P-002
4. FOR INTER LOCK DESCRIPTION REFER 20312-ZR-RT-C-00-005
5. FOR TAGGING PROCEDURE REFER 20312-ZR-AP-A-003

HOLD LIST:

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DISCIPLINE			PJE/EM	SIPSC/PM
3	17 Mar'10	REISSUED FOR "CONSTRUCTION"	AM	SMD	SB	LM	WDF
2	22 Mar'09	ISSUED FOR "CONSTRUCTION"	GQH	SMD	SB	LM	WDF
1	22 Jan'09	ISSUED FOR "HAZOP"	AM	SMD	SB	LM	WDF

REVISIONS

COMPANY

Groupement SONATRACH-SINOPEC

DESIGN CONTRACTOR

CH2MHILL

PROJECT TITLE

PROJET DEVELOPPEMENT DU CHAMP DE ZARZAITINE (INSTALLATIONS DE SURFACE)

PROJECT DEVELOPMENT OF OILFIELD ZARZAITINE (SURFACE FACILITY)

CONTRACT N°. I-013/GSS-2008

DRAWING TITLE

P & ID
EMERGENCY GENERATOR SKID
OIL PROCESS AND STORAGE CENTRE

JOB CODE	20312	CLASS	A
CONTRACTOR DWG No.	20312-C4-ER21-012	SIZE	B

SCALE	PROJECT •	COMPANY 'S DRAWING No.	SHT	REV
NONE	20312	20312-C4-DC-C-83-001	1/1	3

CAD FILE NAME: C4DCC83001